CDP-M400CS

SERVICE MANUAL

US Model
Canadian Model

Ver. 1.0 2004.11

Model Name Using Similar Mechanism	CDP-CX455
CD Mechanism Type	CDM62-K1BD46A
Base Unit Type	BU-K1BD46A
Optical Pick-up Type	KSM-213BFN

SPECIFICATIONS

Compact disc player

Laser Semiconductor laser (λ = 780 nm)
Emission duration: continuous

Laser output Max 44.6 µW*
* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up block with 7 mm aperture.

Frequency response 20 Hz to 20 kHz ±0.5 dB
Signal-to-noise ratio More than 108 dB
Dynamic range More than 85 dB

Harmonic distortion Less than 0.012%

Output

	Jack type	Maximum output level	Load impedance
LINE OUT	Phono jacks	2 V (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT (OPTICAL)	Optical output connector	–18 dBm	Wave length: 660 nm

General

Power requirements 120 V AC, 60 Hz

Power consumption 16 W

Dimensions (approx.) (w/h/d) 430 × 189 × 537 mm (17 × 7 1/2 × 21 1/4 in.) incl. projecting parts

Mass (approx.) 8.8 kg (19 lbs 7 oz.)

Supplied accessories

- Audio cord (1)
- Remote commander (remote) (1)
- Size AA (LR6) batteries (2)

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

9-879-247-01
2004K1678-1
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Sony Corporation
Audio Group
Published by Sony Engineering Corporation

SONY®

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTASSA OLET ALTTINA NÄKYMÄTTÖMÄLLE LASERSÄTEIYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLIG LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYLING LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYÁZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATIAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

The following caution label is located inside of the unit.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COM- POSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

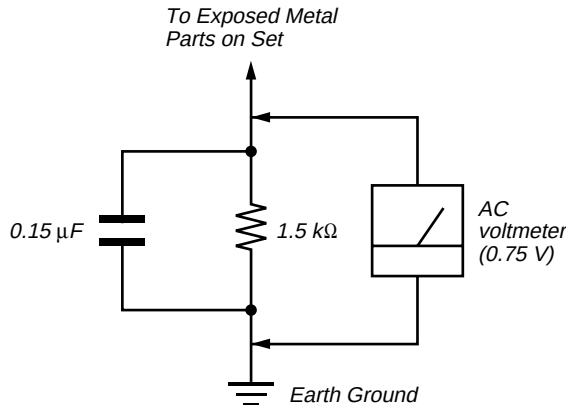

Fig. A. Using an AC voltmeter to check AC leakage.

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NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the “S curve check” in “CD section adjustment” and check that the S curve waveforms is output three times.

CD-TEXT TEST DISC

This unit is able to display the TEXT data (character information) written in the CD on its fluorescent indicator tube.
The CD-TEXT TEST DISC (TGCS-313:J-2501-126-A) is used for checking the display.
To check, perform the following procedure.

Checking Method:

1. Turn ON the power, set the disc on the disc table with the side labeled as “test disc” as the right side, close the front cover, and chuck the disc.
2. The following will be displayed on the fluorescent indicator tube. (The display switches each time the DISPLAY button is pressed.)
   Display : CD TEXT Test Disc (Album Title)
3. Press the ▷ button and play back the disc.
4. The following will be displayed on the fluorescent indicator tube. (If nothing is displayed, press the DISPLAY button.)
   Display : 1kHz/0 dB/ L&R
5. Rotate ⏮ AMS ⏭ knob to switch the track. The text data of each track will be displayed.
   For details of the displayed contents for each track, refer to “Table 1 : CD-TEXT TEST DISC Text Data Contents” and “Table 2 : CD-TEXT TEST DISC Recorded Contents and Display”.

Restrictions in CD-TEXT Display

In this unit, some special characters will not be displayed properly. These will be displayed as a space or a character resembling it. For details, refer to “Table 2 : CD-TEXT DISC Recorded Contents and Display”.

Table 1 : CD-TEXT TEST DISC Text Data Contents (TRACKS No. 1 to 41:Normal Characters)

TRACK No.	Displayed Contents	TRACK No.	Displayed Contents
1	1kHz/0dB/L&R	22	1kHz/-90dB/L&R
2	20Hz/0dB/L&R	23	Infinity Zero w/o emphasis//L&R
3	40Hz/0dB/L&R	24	Infinity Zero with emphasis//L&R
4	100Hz/0dB/L&R	25	400Hz+7kHz(4:1)/0dB/L&R
5	200Hz/0dB/L&R	26	400Hz+7kHz(4:1)/-10dB/L&R
6	500Hz/0dB/L&R	27	19kHz+20kHz(1:1)/0dB/L&R
7	1kHz/0dB/L&R	28	19kHz+20kHz(1:1)/-10dB/L&R
8	5kHz/0dB/L&R	29	100Hz/0dB/L*
9	7kHz/0dB/L&R	30	1kHz/0dB/L*
10	10kHz/0dB/L&R	31	10kHz/0dB/L*
11	16kHz/0dB/L&R	32	20kHz/0dB/L*
12	18kHz/0dB/L&R	33	100Hz/0dB/R*
13	20kHz/0dB/L&R	34	1kHz/0dB/R*
14	1kHz/0dB/L&R	35	10kHz/0dB/R*
15	1kHz/-1dB/L&R	36	20kHz/0dB/R*
16	1kHz/-3dB/L&R	37	100Hz Squere Wave//L&R
17	1kHz/-6dB/L&R	38	1kHz Squere Wave//L&R
18	1kHz/-10dB/L&R	39	1kHz w/emphasis/-0.37dB/L&R
19	1kHz/-20dB/L&R	40	5kHz w/emphasis/-4.53dB/L&R
20	1kHz/-60dB/L&R	41	16kHz w/emphasis/-9.04dB/L&R
21	1kHz/-80dB/L&R		

NOTE : The contents of Track No. 1 to 41 are the same as those of the current TEST DISC-their titles are displayed.

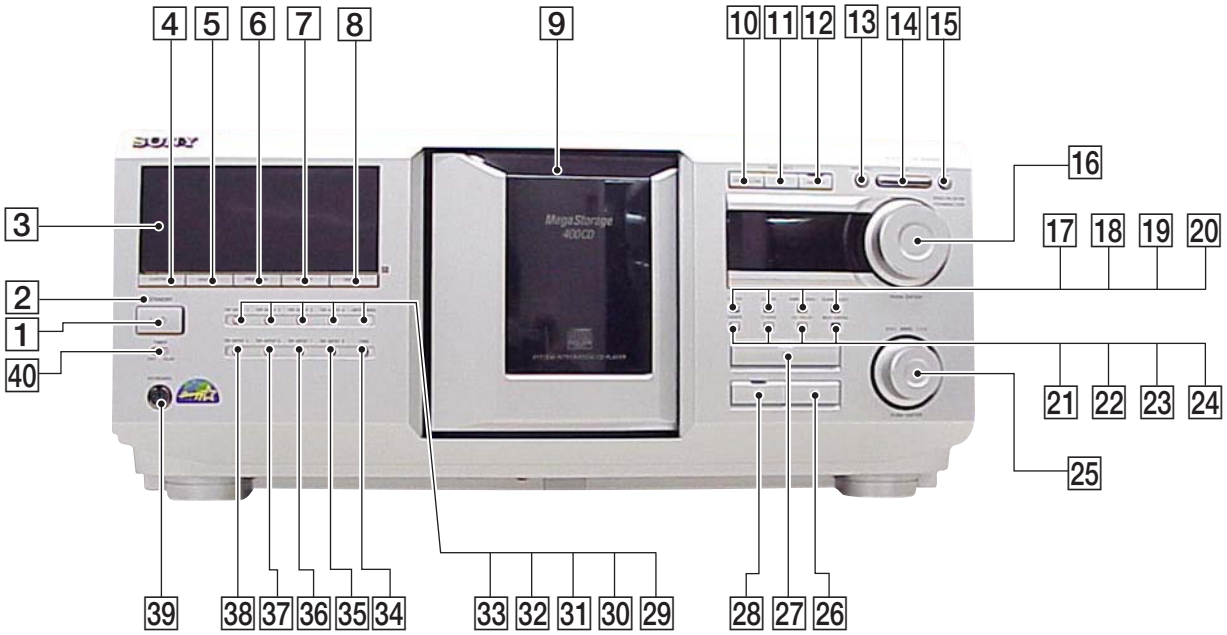
Table 2 : CD-TEXT TEST DISC Recorded Contents and Display
(In this unit, some special characters cannot be displayed. This is no a fault.)

TRACK No.	Recorded Contents		Display
42	! ” # $ % & ´	(21h to 27h)1kHz 0dB L&R	← All the same
43	( ) * + , – . /	(28h to 2Fh)	← All the same
44	0 1 2 3 4 5 6 7	(30h to 37h)	← All the same
45	8 9 : ; < = > ?	(38h to 3Fh)	← All the same
46	@ A B C D E F G	(40h to 47h)	← All the same
47	H I J K L M N O	(48h to 4Fh)	← All the same
48	P Q R S T U V W	(50h to 57h)	← All the same
49	X Y Z [¥] ^ _	(58h to 5Fh)	X Y Z [\ ] ^ _ (58····
50	` a b c d e f g	(60h to 67h)	← All the same
51	h i j k l m n o	(68h to 6Fh)	← All the same
52	p q r s t u v w	(70h to 77h)	← All the same
53	x y z { l } ~ ■	(78h to 7Fh)	← All the same
54	▯ ¡ ¢ £ ¤ ¥ ¦ §	(A0h to A7h) 8859-1	← All the same
55	≥ C ª « ¬ ® ¯	(A8h to AFh)	← All the same
56	° ± ² ³ ´ µ ¶ •	(B0h to B7h)	← All the same
57	† ¹ º » ¼ ½ ¾ ¿	(B8h to BFh)	¼ ½ ¾ are displayed without “/”
58	À Á Â Ã Ä Å Æ Ç	(C0h to C7h)	← All the same
59	È É Ê Ë Ì Í Î Ï	(C8h to CFh)	← All the same
60	D Ñ Ò Ó Ô Õ Ö ×	(D0h to D7h)	← All the same
61	Ø Ù Ú Û Ü Y Þ ß	(D8h to DFh)	← All the same
62	à á â ã ä å æ ç	(E0h to E7h)	← All the same
63	è é ê ë ì í î ï	(E8h to EFh)	← All the same
64	ð ñ ò ó ô õ ö ÷	(F0h to F7h)	← All the same
65	ø ù ú û ü y þ ÿ	(F8h to FFh)	← All the same
66	No.66		← All the same
67	No.67		← All the same
to	to		to
99	No.99		← All the same

SECTION 2
GENERAL

This section is extracted from instruction manual.

Front Panel



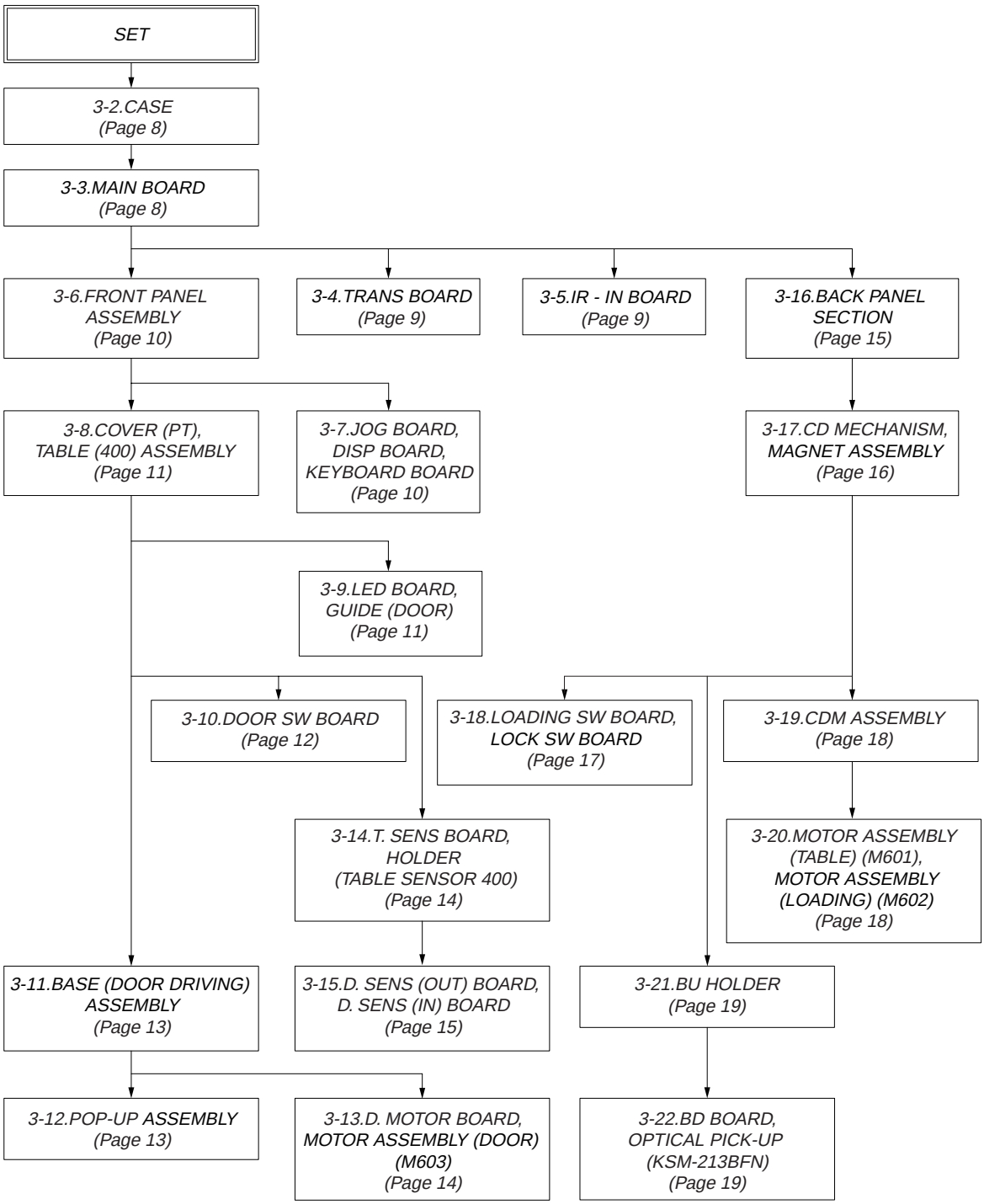
LOCATION OF PARTS AND CONTROLS

1 I/⏻ (power) button
2 STANDBY indicator
3 Display window
4 CONTINUE button
5 SHUFFLE button
6 PROGRAM button
7 REPEAT button
8 DISPLAY button
9 Front cover
10 OPEN/CLOSE button
11 DISC EJECT button
12 HISTORY button and indicator
13 MENU/NO button
14 +100 button
15 YES button
16 DISC/ALBUM/CHARACTER/PUSH ENTER knob and button
17 CHECK button
18 CLEAR button
19 NAME SEARCH button
20 ALBUM SELECT button and indicator
21 FADER button
22 X-FADE button
23 NO DELAY button
24 MEGA CONTROL button and indicator
25 ⏮ AMS ⏭ /PUSH ENTER knob and button
26 ■ (stop) button
27 ▷ (play) button and indicator
28 ❚❚ (pause) button and indicator
29 ARTIST MODE button and indicator
30 TOP ARTIST 4 button and indicator
31 TOP ARTIST 3 button and indicator
32 TOP ARTIST 2 button and indicator
33 TOP ARTIST 1 button and indicator
34 TIME button
35 TOP ARTIST 8 button and indicator
36 TOP ARTIST 7 button and indicator
37 TOP ARTIST 6 button and indicator
38 TOP ARTIST 5 button and indicator
39 KEYBOARD jack
40 TIMER OFF/PLAY switch

SECTION 3
DISASSEMBLY

3-1. DISASSEMBLY FLOW

• The equipment can be removed using the following procedure.


SET
3-2.CASE (Page 8)
3-3.MAIN BOARD (Page 8)
3-6.FRONT PANEL ASSEMBLY (Page 10)
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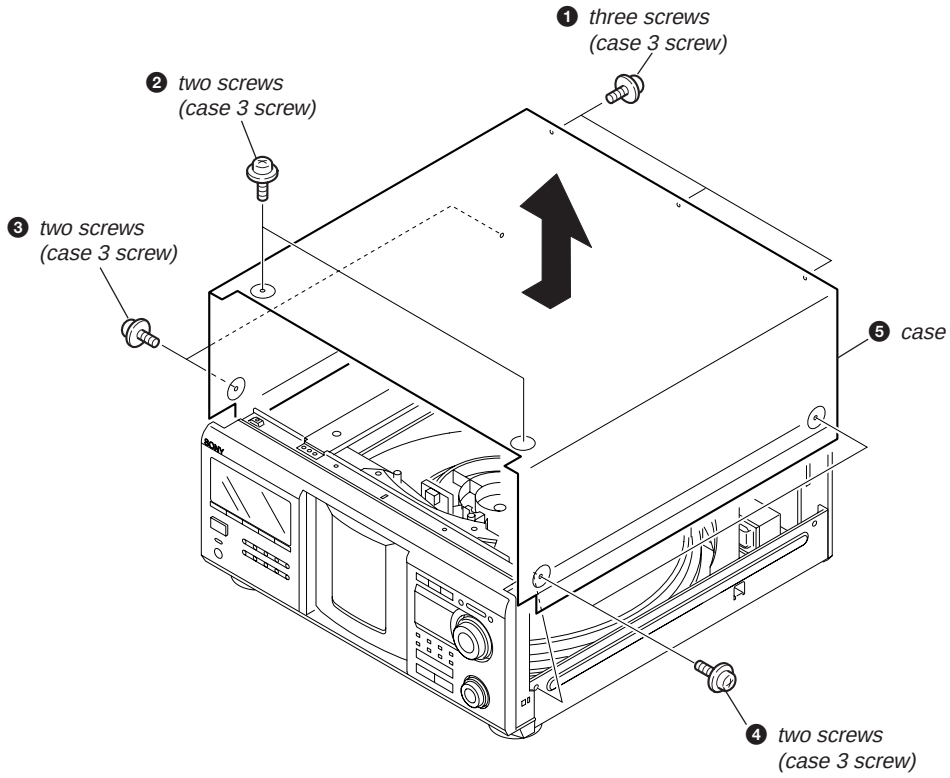
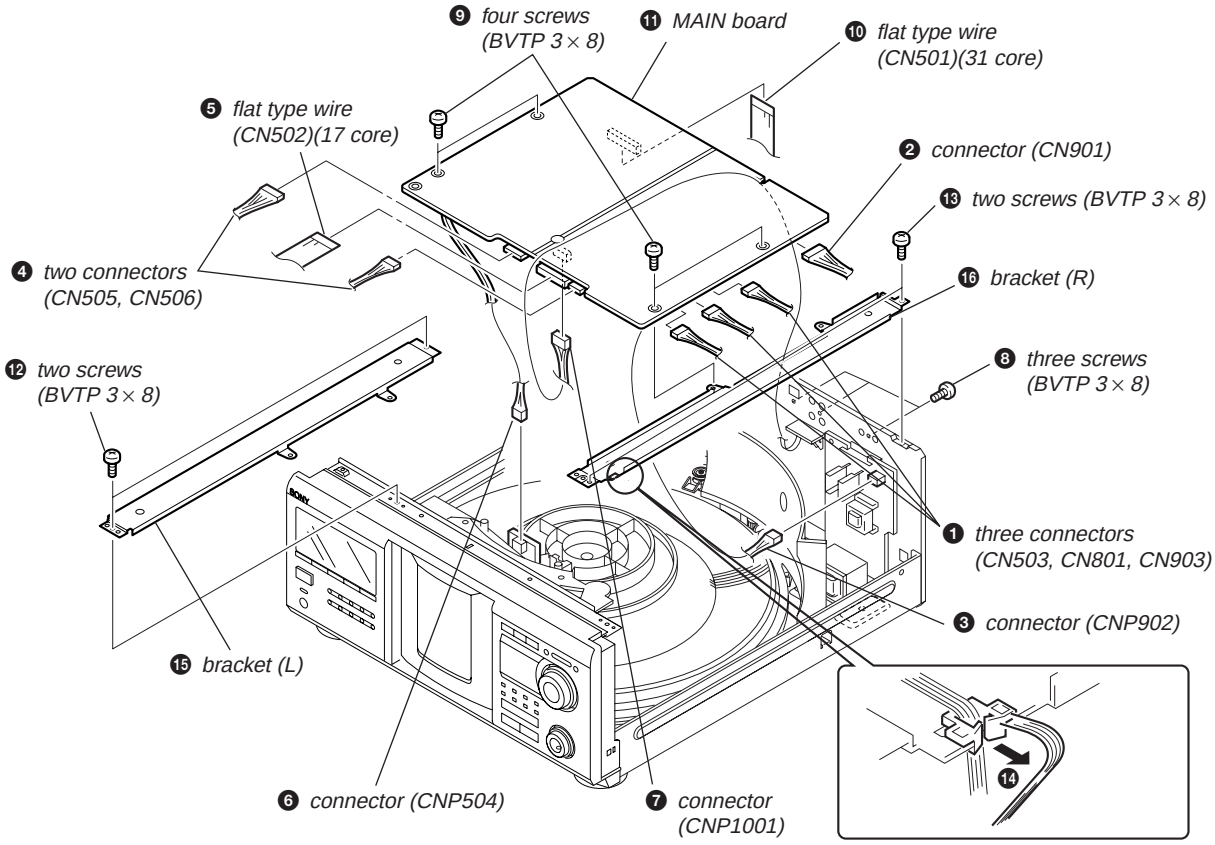
3-22.BD BOARD, OPTICAL PICK-UP (KSM-213BFN) (Page 19)

Note: Follow the disassembly procedure in the numerical order given.

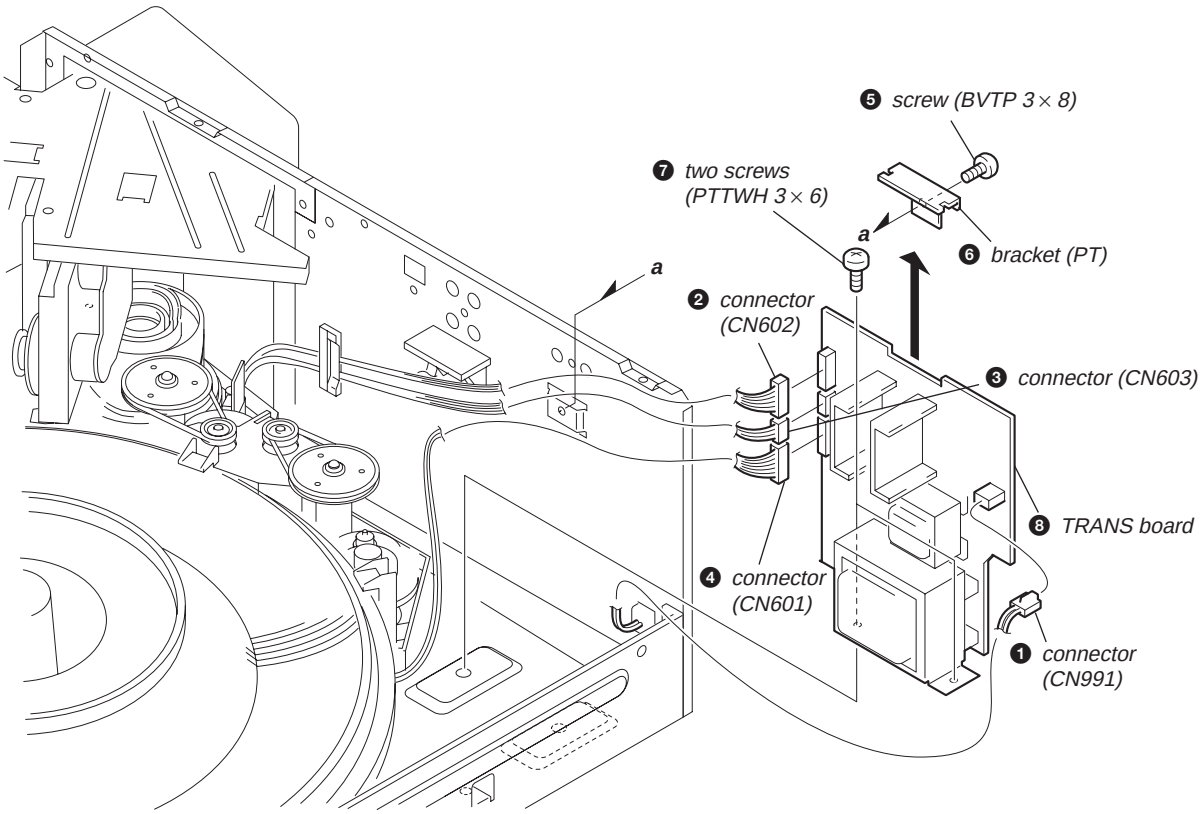
3-2. CASE



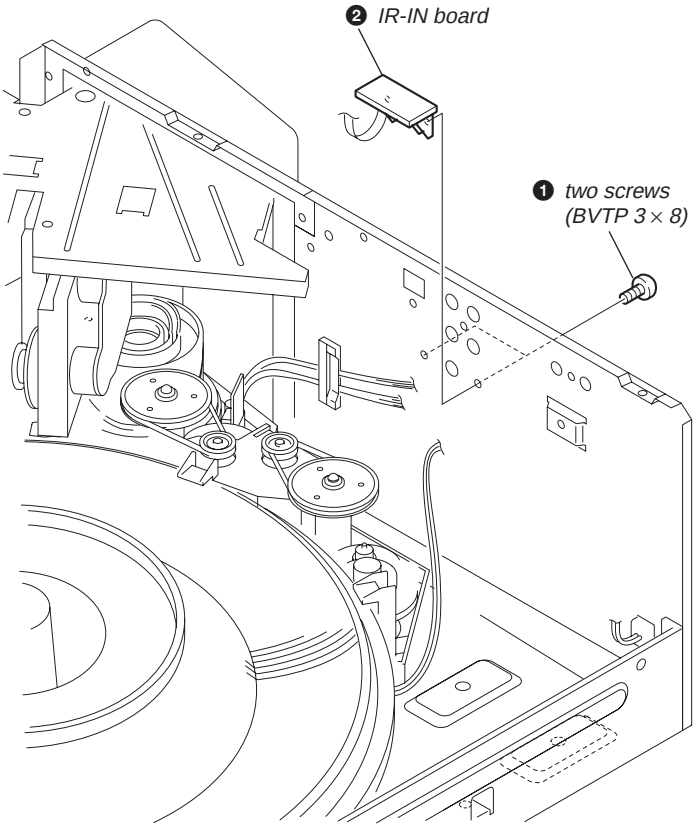
3-3. MAIN BOARD



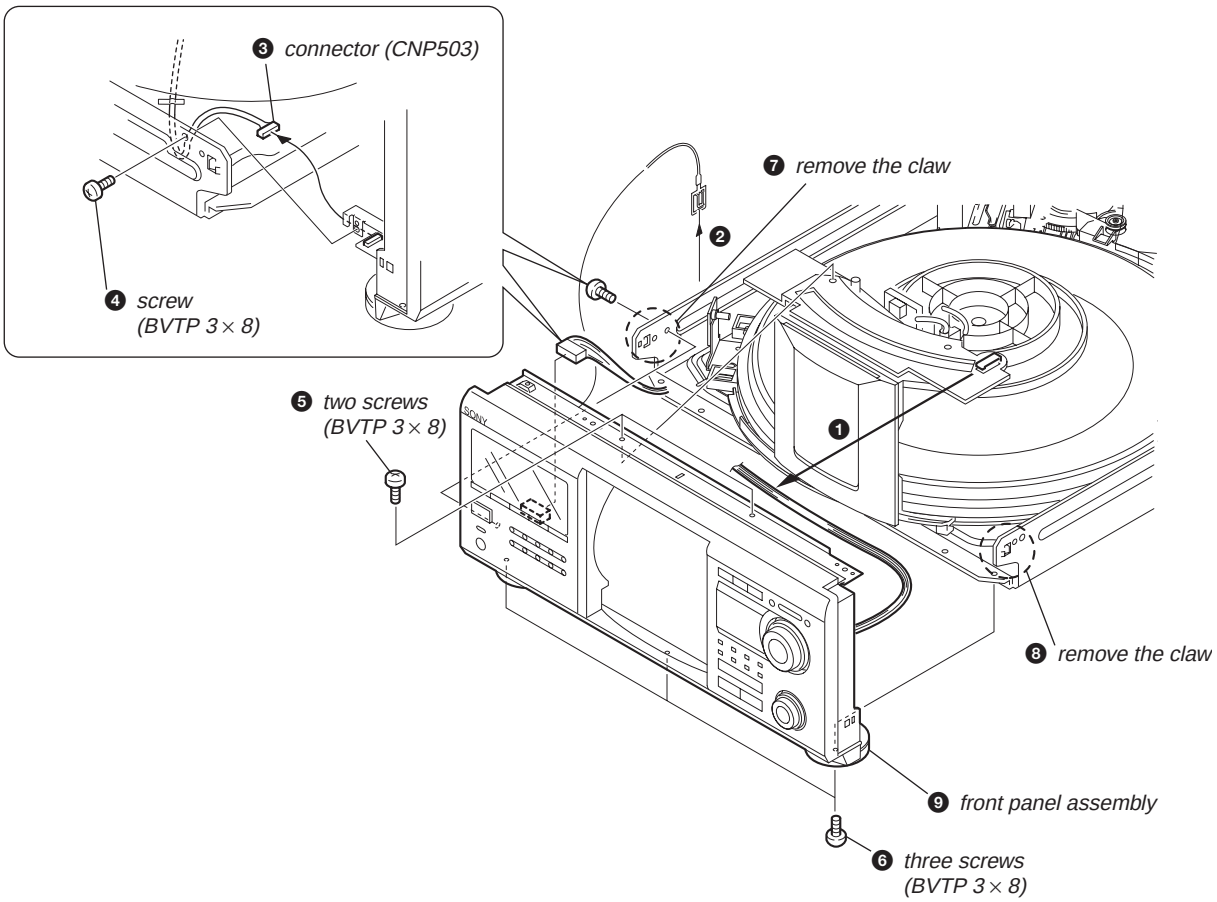
3-4. TRANS BOARD



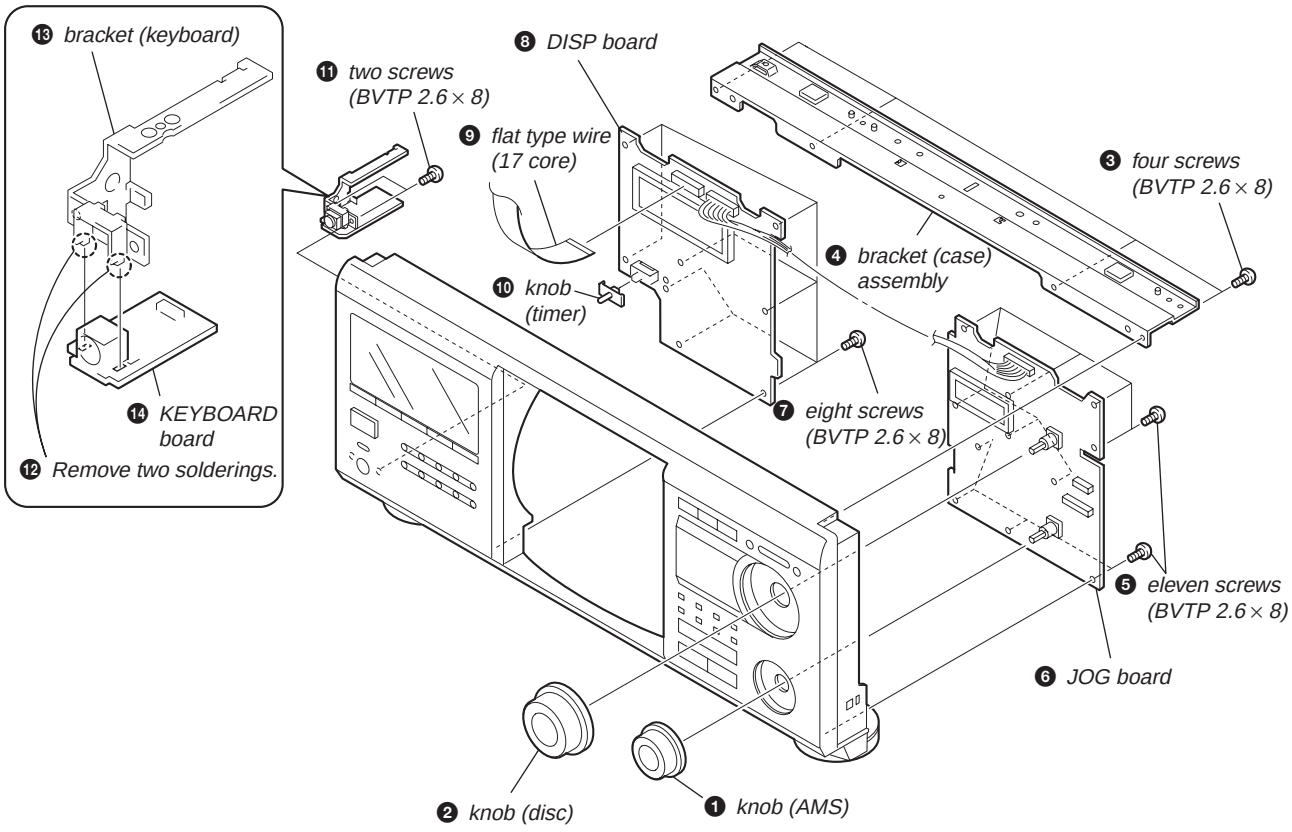
3-5. IR-IN BOARD



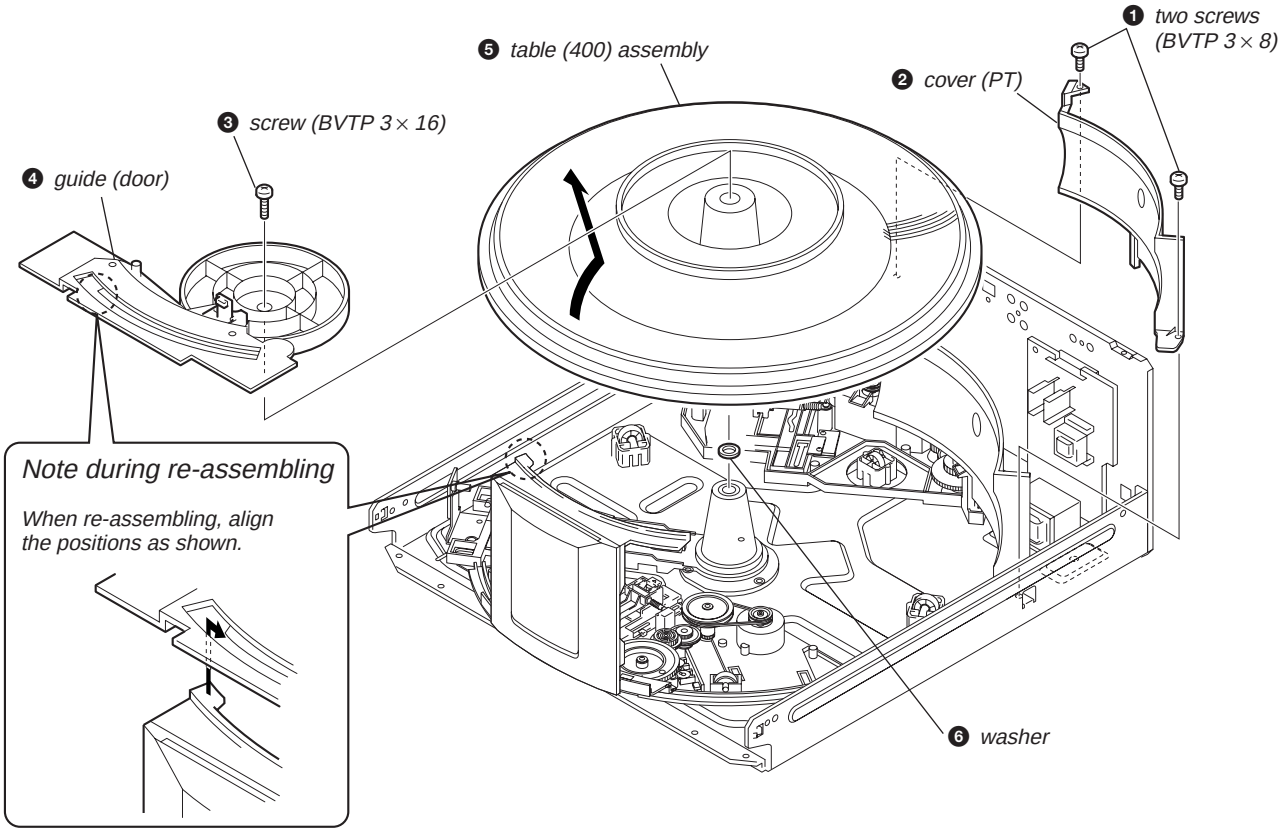
3-6. FRONT PANEL ASSEMBLY



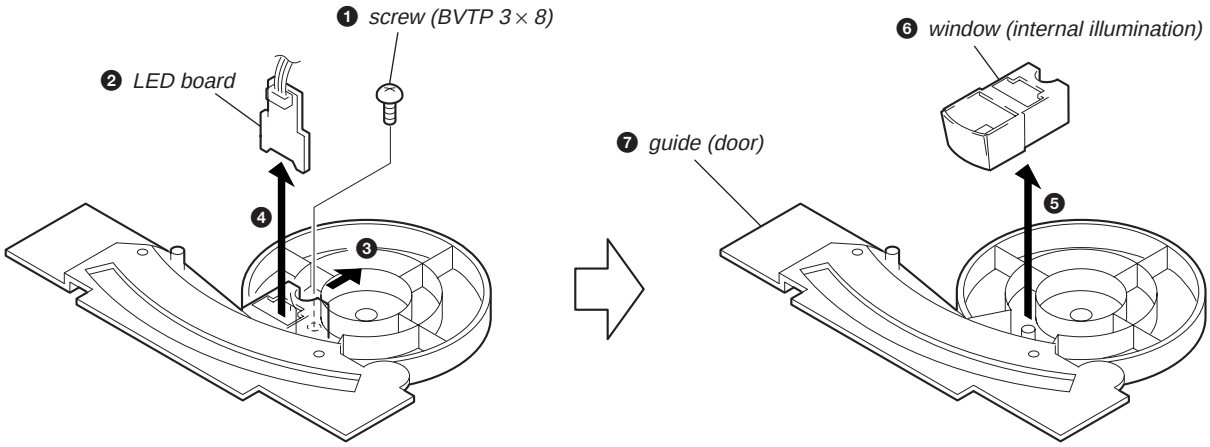
3-7. JOG BOARD, DISP BOARD, KEYBOARD BOARD


⓭ bracket (keyboard)
⓮ KEYBOARD board
⓬ Remove two solderings.
⓫ two screws (BVTP 2.6× 8)
❽ DISP board
❾ flat type wire (17 core)
❸ four screws (BVTP 2.6× 8)
❹ bracket (case) assembly
❿ knob (timer)
❼ eight screws (BVTP 2.6× 8)
❺ eleven screws (BVTP 2.6× 8)
❻ JOG board
❷ knob (disc)
❶ knob (AMS)

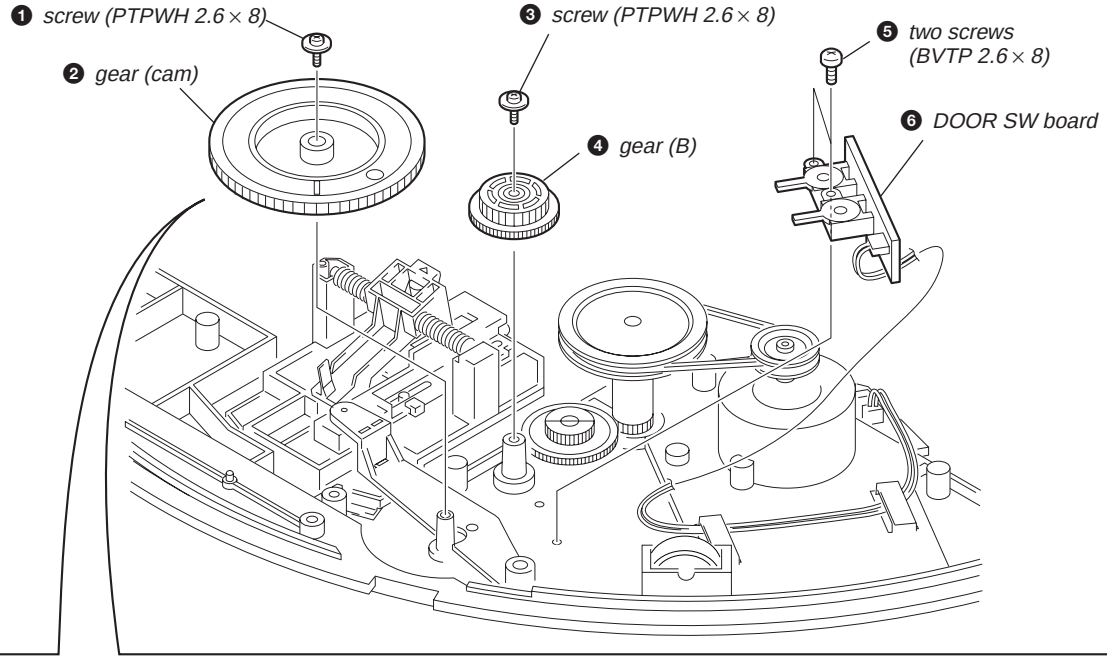
3-8. COVER (PT), TABLE (400) ASSEMBLY


❶ two screws (BVTP 3 × 8)
❷ cover (PT)
❸ screw (BVTP 3 × 16)
❹ guide (door)
❺ table (400) assembly
❻ washer
Note during re-assembling
When re-assembling, align the positions as shown.

3-9. LED BOARD, GUIDE (DOOR)

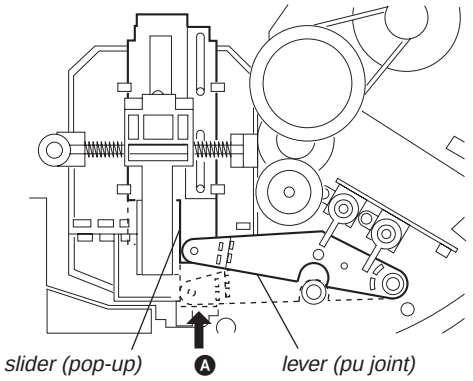


3-10. DOOR SW BOARD

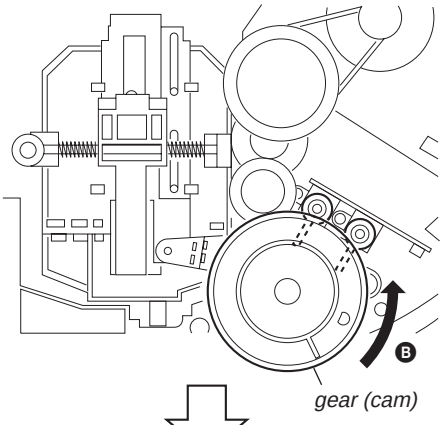


Precaution during the gear (cam) installation

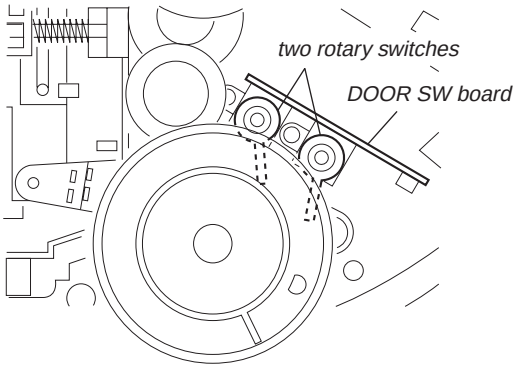
❶ *Move the slider (pop-up) and the lever (pu joint) fully in the direction of the arrow* Ⓐ.



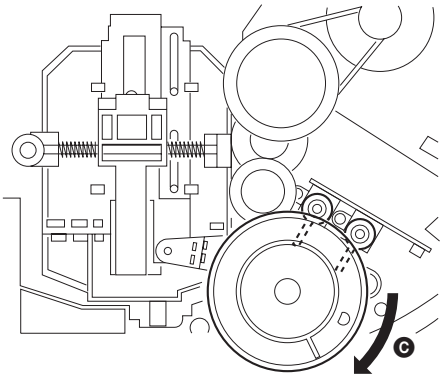
❷ *Install the gear (cam) in the direction shown in the illustration and rotate it fully in the direction of the arrow* Ⓑ.



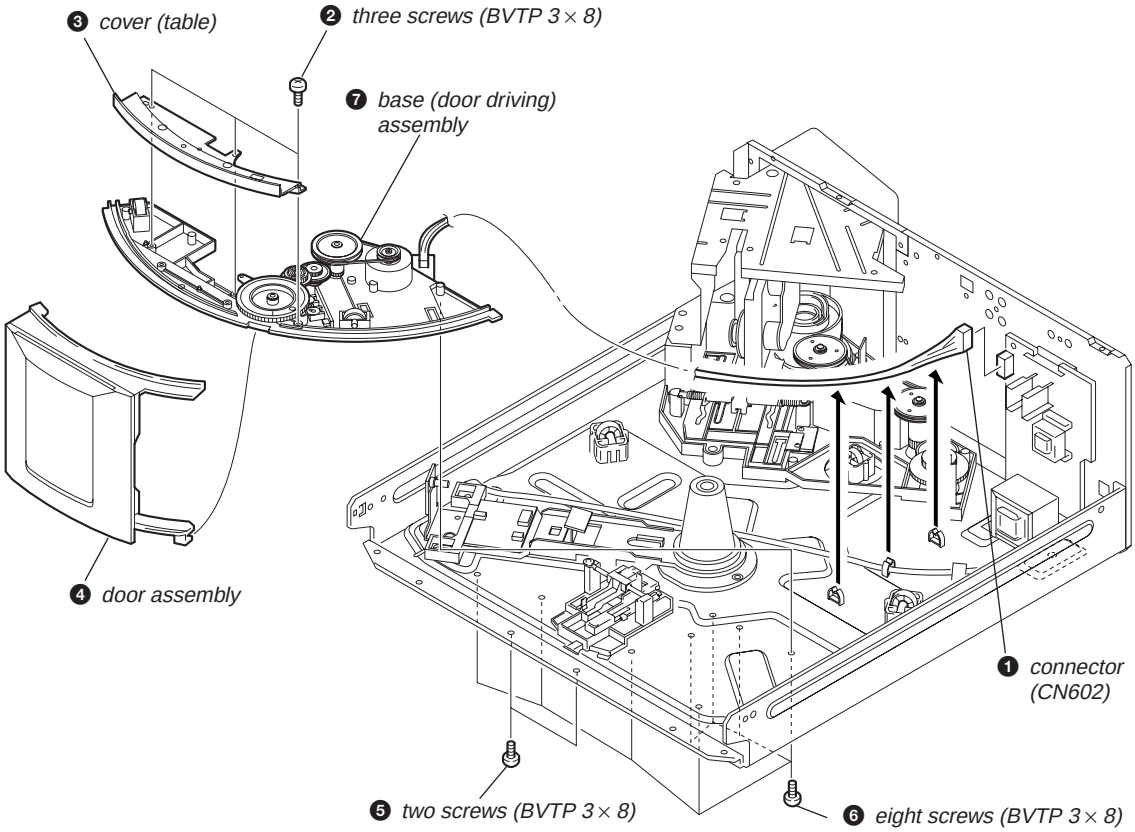
(*The levers of the two rotary switches on the D. SW board are shown in the illustration below.*)



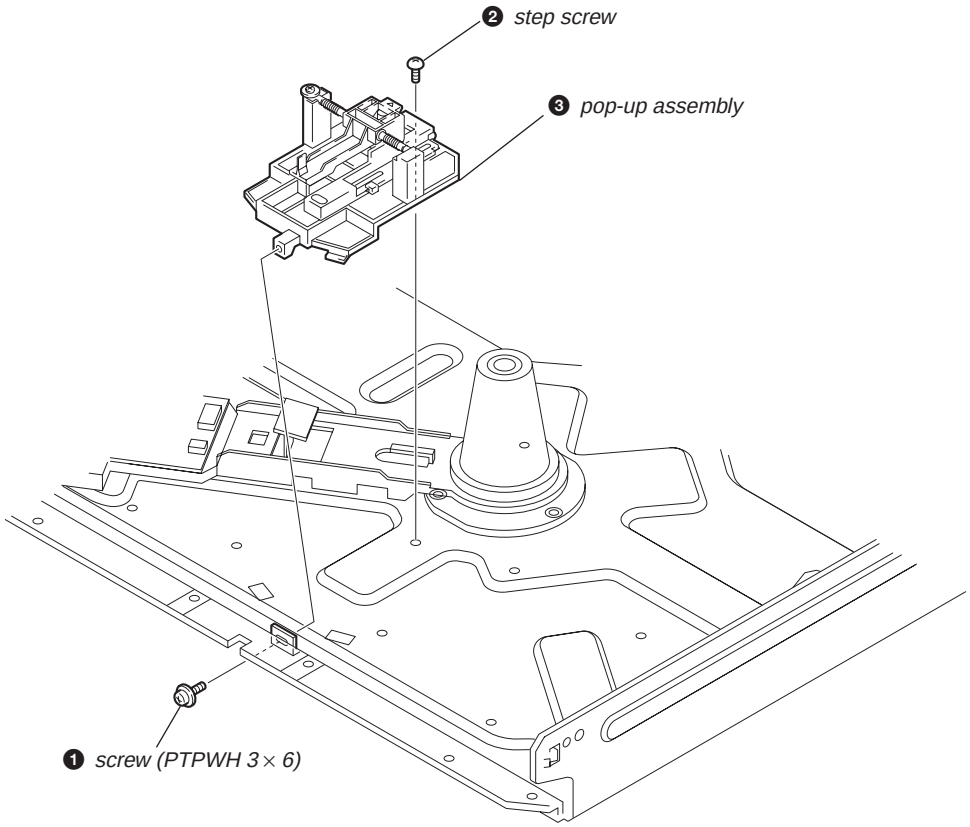
❸ *When the gear (cam) happens to go too deep, return it to the original position in the direction of the arrow* Ⓒ.



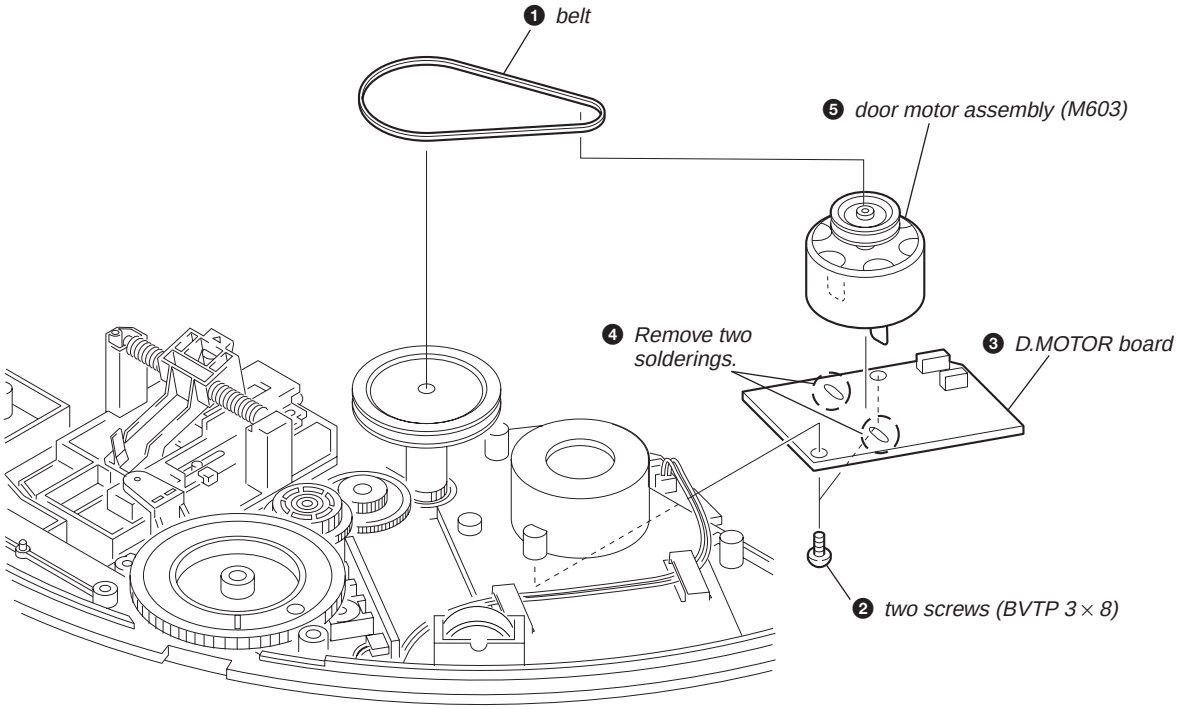
3-11. BASE (DOOR DRIVING) ASSEMBLY


❸ cover (table)
❷ three screws (BVTP 3 × 8)
❼ base (door driving) assembly
❹ door assembly
❶ connector (CN602)
❺ two screws (BVTP 3 × 8)
❻ eight screws (BVTP 3 × 8)

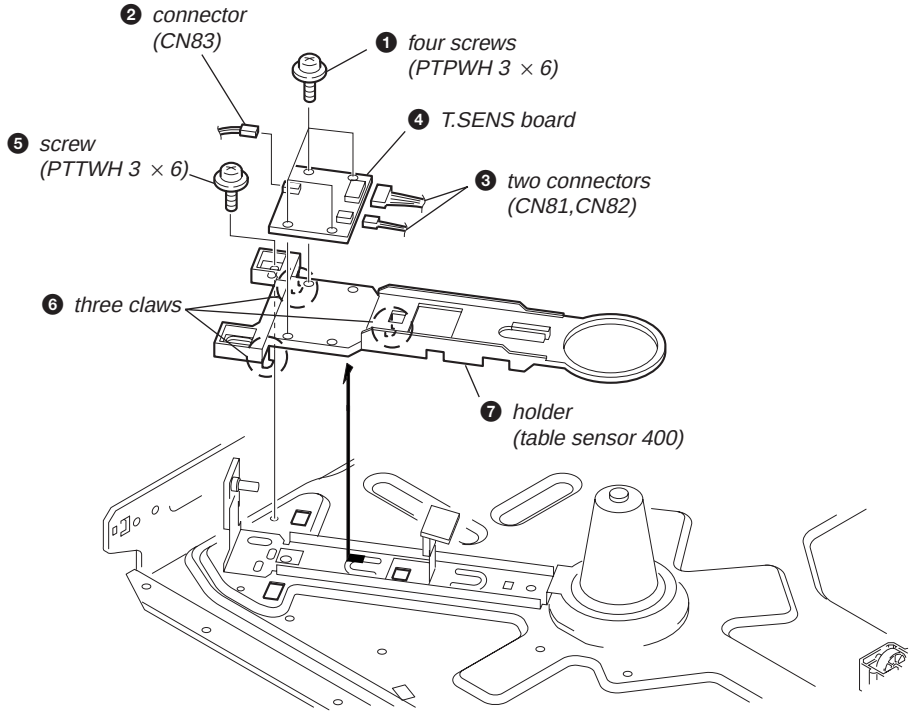
3-12. POP-UP ASSEMBLY



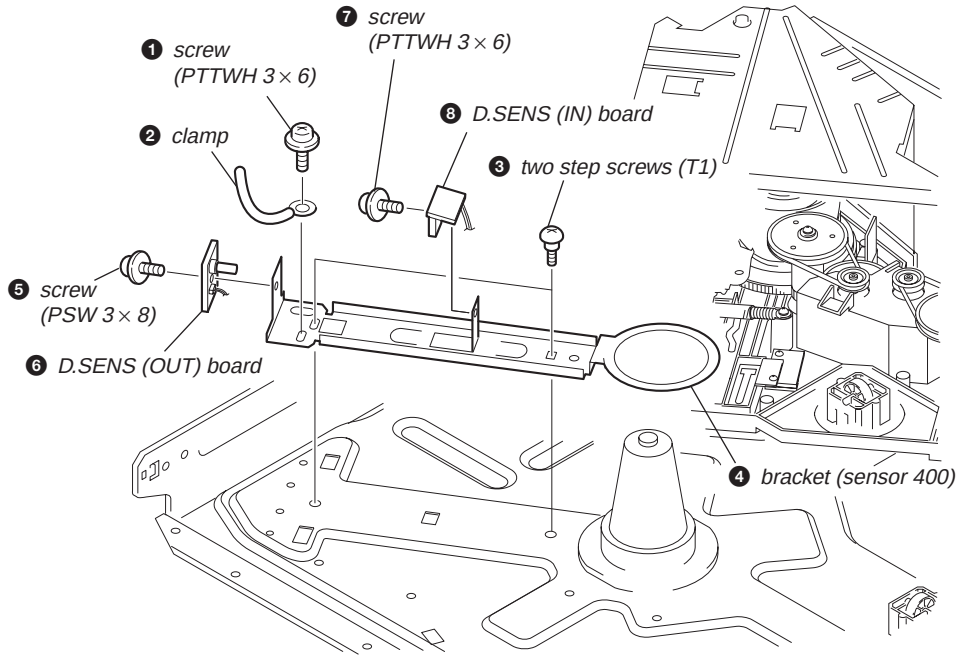
3-13. D.MOTOR BOARD, MOTOR ASSEMBLY (DOOR) (M603)



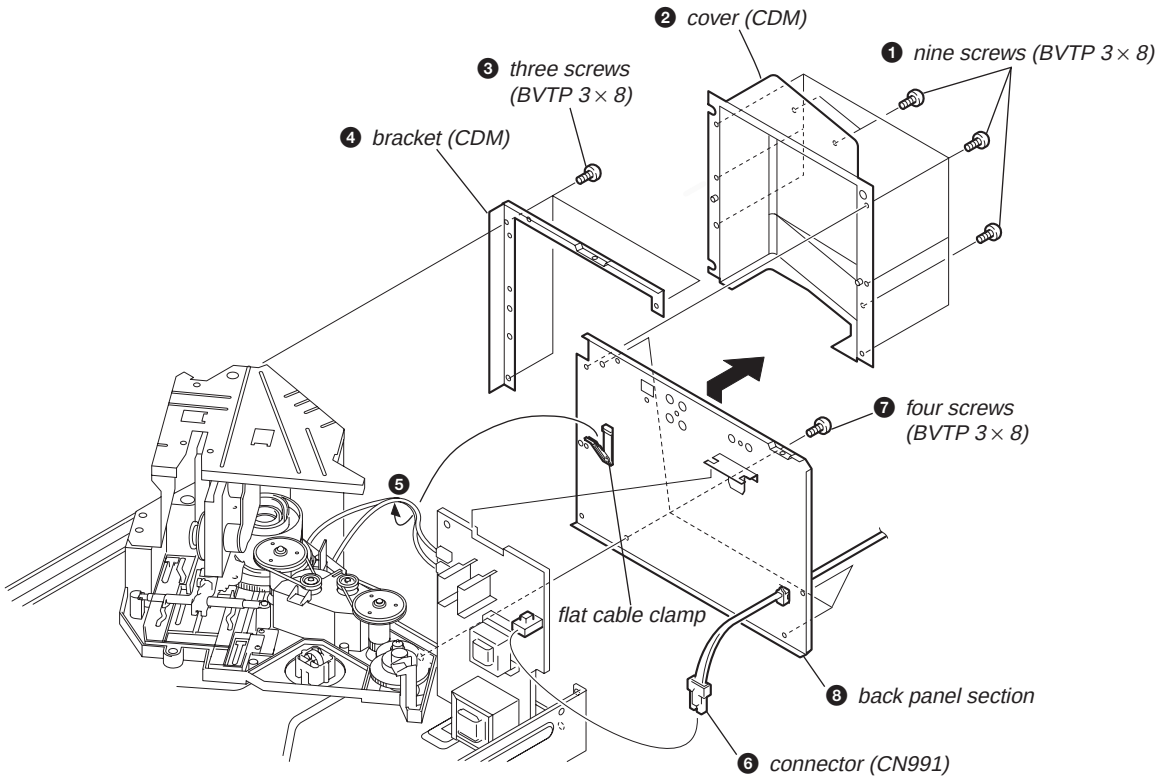
3-14. T.SENS BOARD, HOLDER (TABLE SENSOR 400)


❷ connector (CN83)
❶ four screws (PTPWH 3 × 6)
❹ T.SENS board
❺ screw (PTTWH 3 × 6)
❸ two connectors (CN81,CN82)
❻ three claws
❼ holder (table sensor 400)

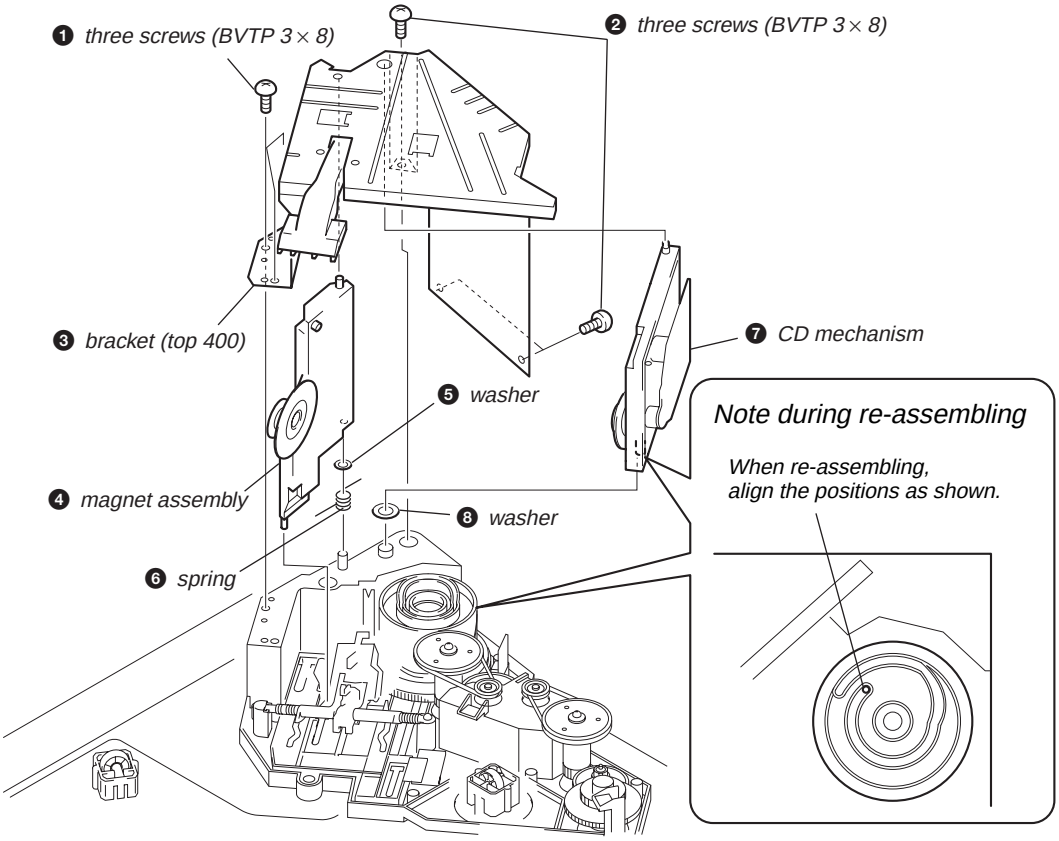
3-15. D.SENS (OUT) BOARD, D.SENS (IN) BOARD



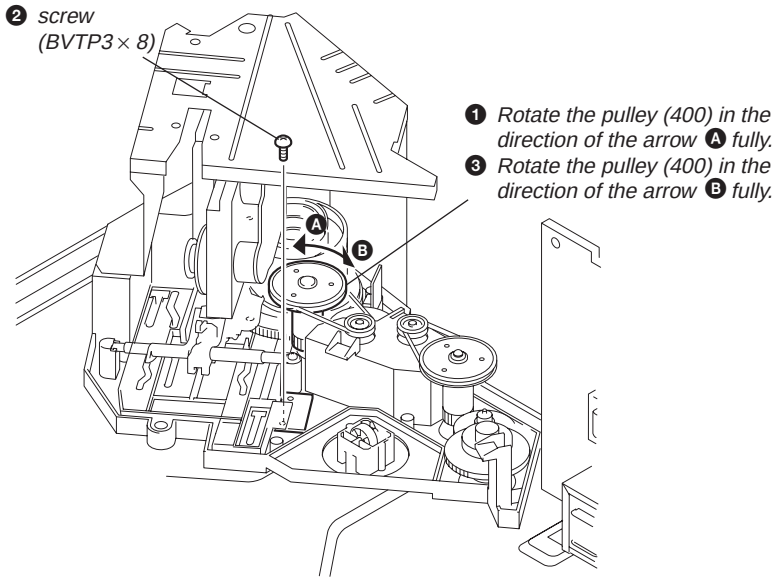
3-16. BACK PANEL SECTION

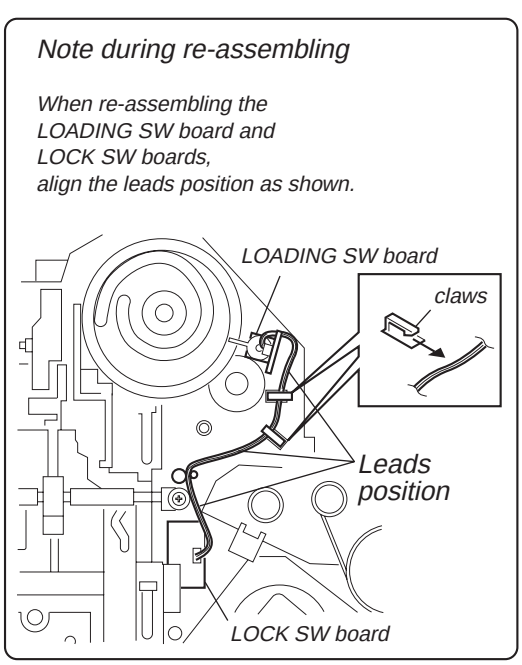


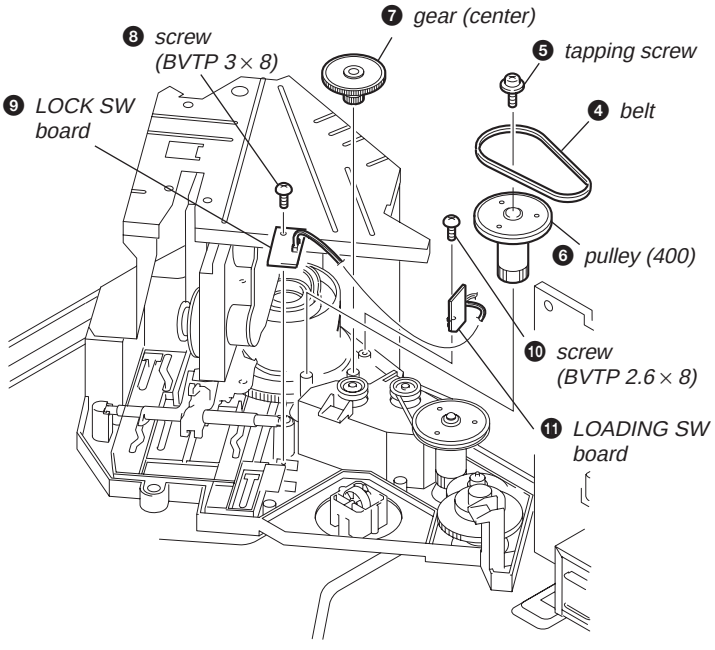
3-17. CD MECHANISM, MAGNET ASSEMBLY



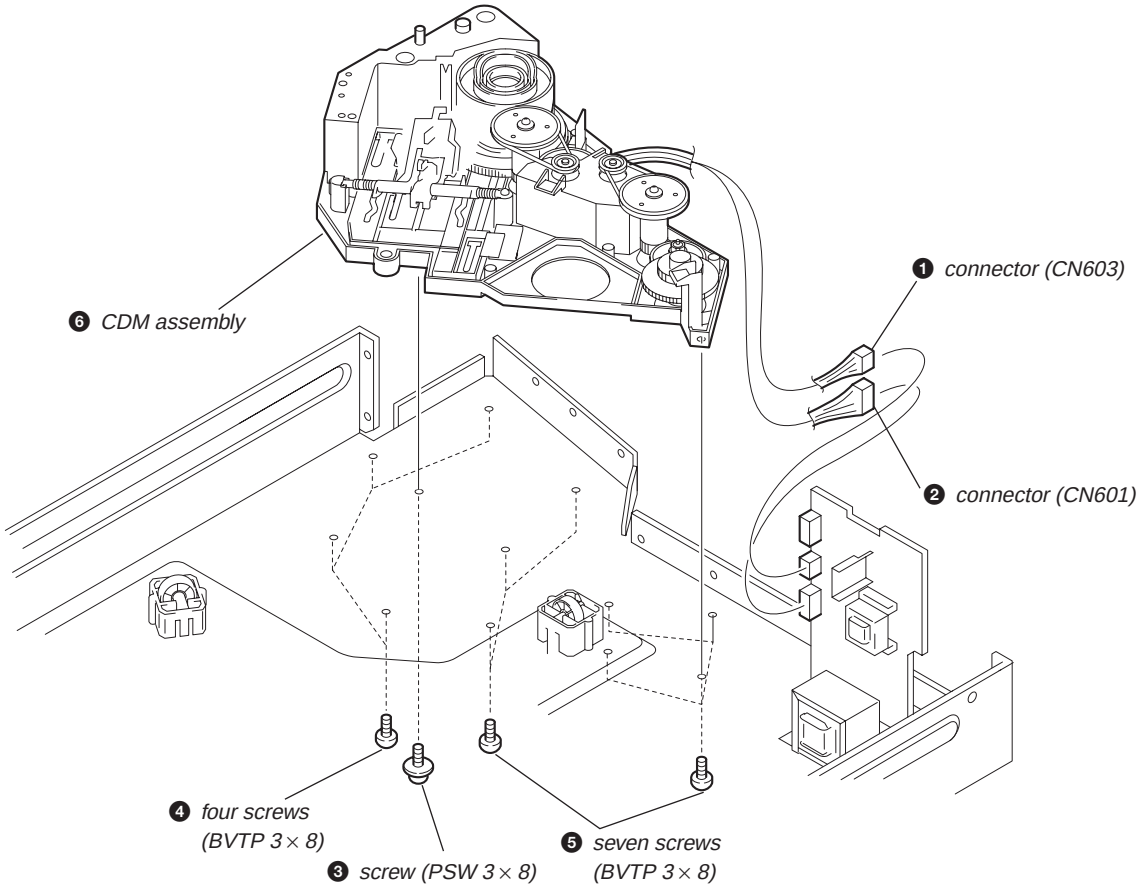
3-18. LOADING SW BOARD, LOCK SW BOARD


❷ screw
(BVTP3 × 8)
❶ Rotate the pulley (400) in the direction of the arrow Ⓐ fully.
❸ Rotate the pulley (400) in the direction of the arrow Ⓑ fully.
Ⓐ
Ⓑ

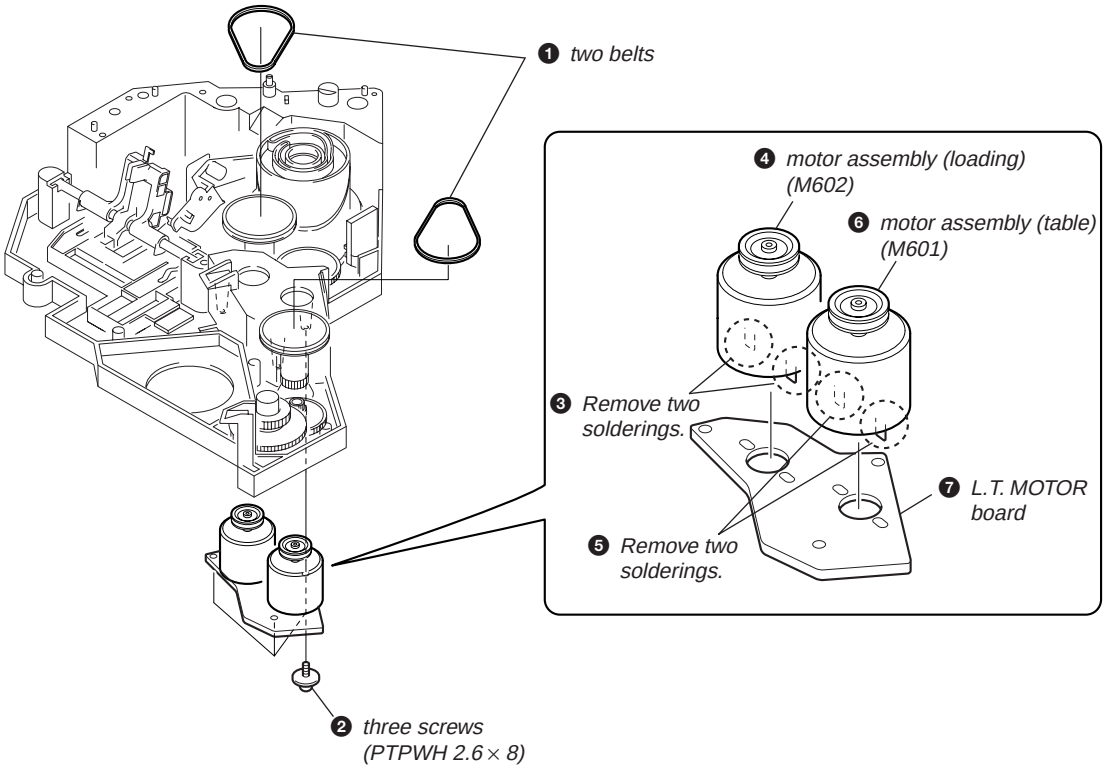

Note during re-assembling
When re-assembling the LOADING SW board and LOCK SW boards, align the leads position as shown.
LOADING SW board
claws
Leads position
LOCK SW board



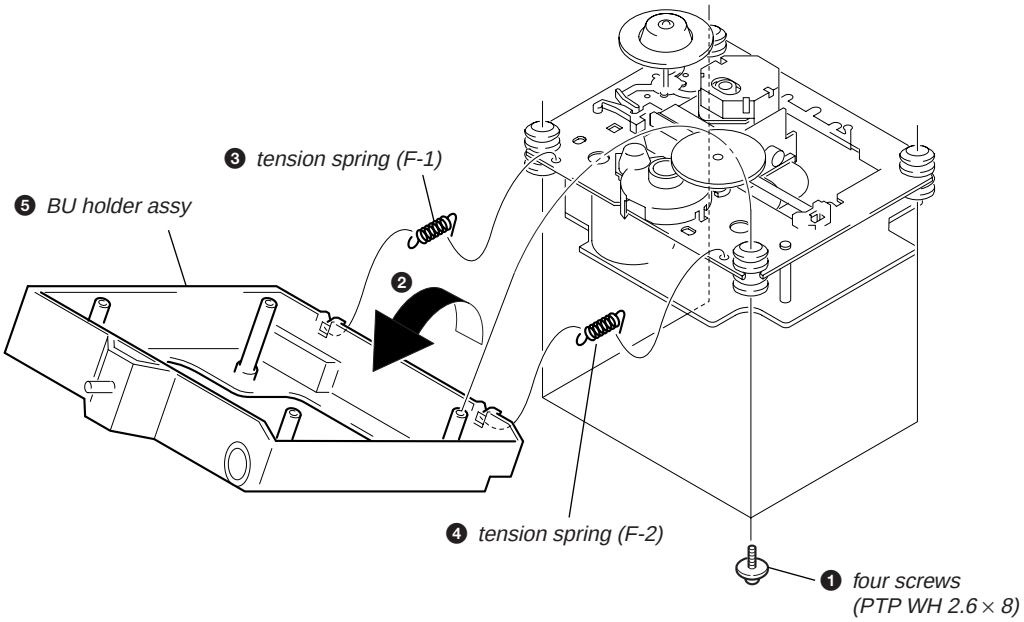
3-19. CDM ASSEMBLY



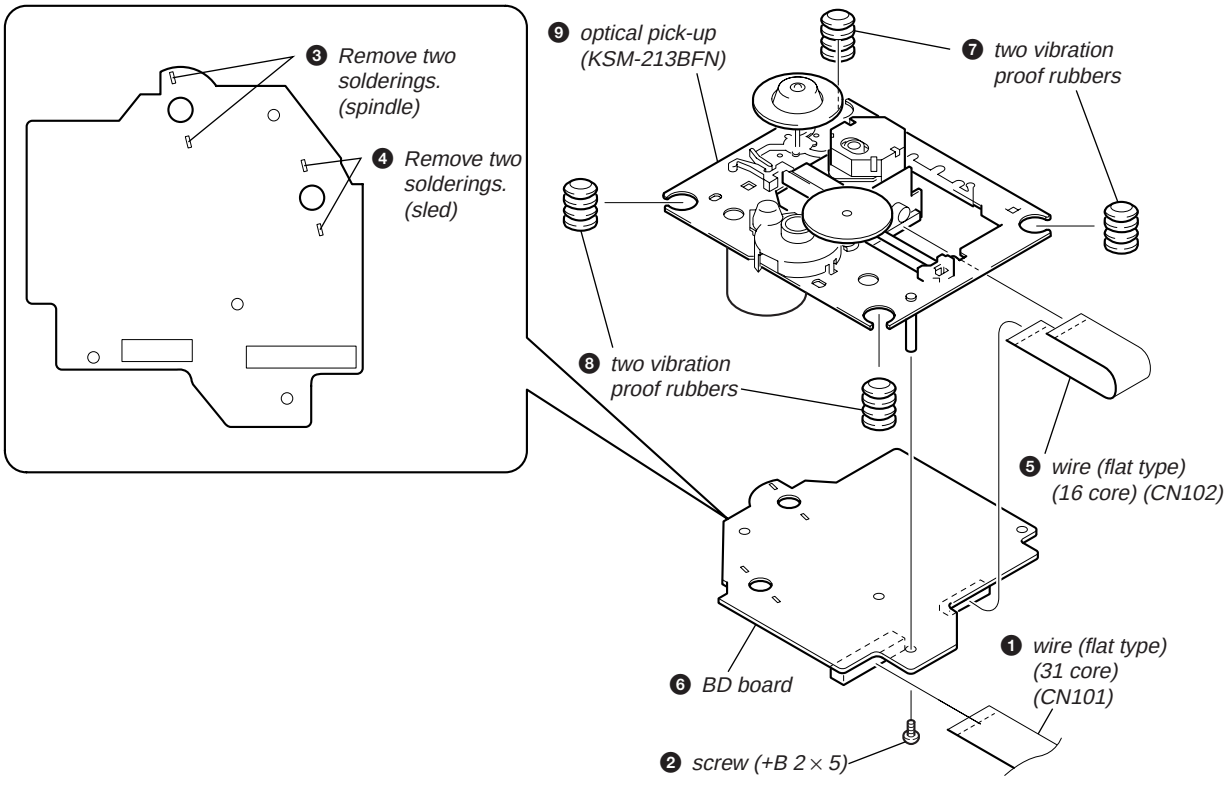
3-20. MOTOR ASSEMBLY (TABLE) (M601), MOTOR ASSEMBLY (LOADING) (M602)


❶ two belts
❹ motor assembly (loading) (M602)
❻ motor assembly (table) (M601)
❸ Remove two solderings.
❼ L.T. MOTOR board
❺ Remove two solderings.
❷ three screws (PTPWH 2.6 × 8)

3-21. BU HOLDER



3-22. BD BOARD, OPTICAL PICK-UP (KSM-213BFN)


❸ Remove two solderings. (spindle)
❹ Remove two solderings. (sled)
❾ optical pick-up (KSM-213BFN)
❼ two vibration proof rubbers
❽ two vibration proof rubbers
❺ wire (flat type) (16 core) (CN102)
❶ wire (flat type) (31 core) (CN101)
❻ BD board
❷ screw (+B 2 × 5)

SECTION 4
TEST MODE

• This unit is provided with several test modes.
Details are shown in the following tables.

<Menu Method>
Turn on the power and press TIME, MEGA CONTROL and I/⏻ buttons.
Rotate the DISC/ALBUM/CHARACTER dial to select any of the following modes.
Push the DISC/ALBUM/CHARACTER dial to enter the test mode.

Display	Contents
Version	Software version display
BU Test	BU test mode
CDM Test	CDM test mode
Aging Mode	Normal aging mode
Ship Mode	Default mode

To exit the mode, usually press the I/⏻ button to enter the standby state.
(When selecting the Ship mode, the standby mode is automatically entered.)

<3 Buttons Method>

Mode name	Power supply state	Mode name	Power supply state
DOOR POP UP AGING MODE	ON	TOP ARTIST 3 + ▷ + +100	
ALL LIT MODE	ON	TOP ARTIST 4 + ▷ + +100	
MODEL NAME DISPLAY	ON	TOP ARTIST 6 + ▷ + +100	
SPRAY MODE	ON	TOP ARTIST 8 + ▷ + +100	
SHIPMENT MODE	ON	ARTIST MODE + ▷ + +100	Same as Ship Mode

To exit the mode, press the I/⏻ button to enter the standby state.
(When selecting the Ship mode, the standby mode is automatically entered.)

SOFT WARE VERSION DISPLAY

- Software version can be displayed on the fluorescent indicator tube.

Procedure:

With the power ON, while pressing the TIME and MEGA CONTROL buttons, press the I/⏻ button.
Rotate the DISC/ALBUM/CHARACTER dial, select "Version" and press the dial.
Software version is displayed on the fluorescent indicator tube.

To end this mode, press the I/⏻ button.

BU TEST MODE

- This mode is used for electrical adjustments.
  Refer to the section on Electrical Adjustment.

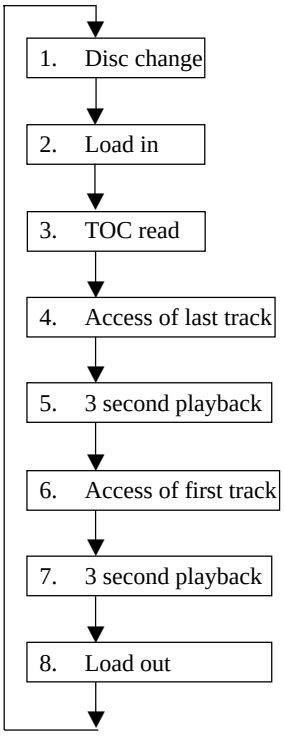
CDM TEST MODE

- This mode is used for mechanical adjustments and electrical adjustments.
  Refer to the section on Mechanical adjustment and Electrical Adjustment.

AGING MODE

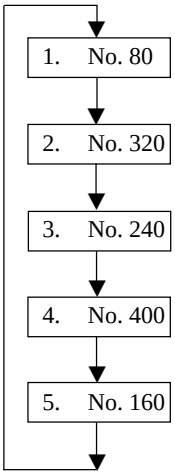
- Mode which repeatedly changes and plays back discs automatically in the unit.
- It will repeat aging as long as no errors occur.
- If an error occurs during aging, it will stop all servos, motors, etc. instantaneously, display the error number, and stop operations.
  The function serves to maintain the state of the unit when errors occur.

Sequence of Aging Mode



Order of Disc Change

(1 cycle takes 3 minutes)



Special Aging Mode Functions

The aging mode is provided with the following convenient functions

1. Disc setting mode:
   5 discs are set before setting the aging mode. This mode makes the setting of these discs more easy.
2. Aging disc count function:
   Functions which displays the number of aging discs carried out on the Fluorescent indicator tube in numbers.

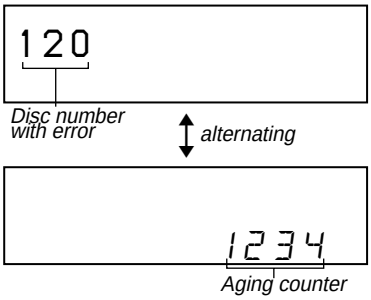
Aging Procedure

1. Turn on the power and press the TIME, MEGA CONTROL and I/⏻ buttons.
2. Rotate DISC/ALBUM/CHARACTER dial, select "Aging Mode" and press the dial to start the aging mode.
3. When the disc set mode is set, the ▷ and ❚❚ LEDs blink.
4. Rotate the DISC/ALBUM/CHARACTER dial. The slits (No. 80, 160, 240, 320, 400) for setting the discs will come forward. Insert the discs into these slits. Do not set the discs in other slits.
5. Press the ▷ button.
6. The ▷ LED blinks, the aging mode is set, and aging is started.
7. The aging cycle lasts 3 minutes. If errors occur during aging, the error number will be displayed on the Fluorescent indicator tube. (Refer to the following table for the details of the errors.)
8. Aging will be repeated as long as no errors occur.
9. After disc load out, the number displayed on the Fluorescent indicator tube will increase.
10. To end aging, press the I/⏻ button.
    If an error occurs and the I/⏻ button is useless, disconnect the power cord from the outlet.

Display in aging cycle

Error Display

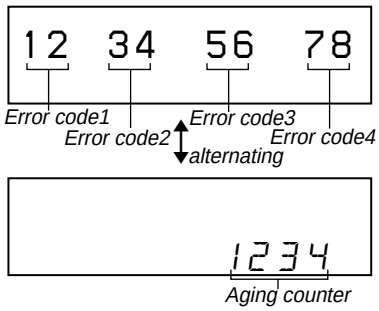
1. Disc sensor error



Error code

Code number	Contents
————	No disc in the speified slit, or Disc in the other slits

2. Mechanism error



Error code 1

Code number	Contents
0X	With no problem
1X	With no problem
2X	Error during door initialization
3X	Error during loading initialization
4X	Error during door initialization
FX	With no problem

X : negligible number

Error code 2

Code number	Contents
1X	Error during loading in
2X	Error during loading out
3X	With no problem
4X	With no problem

X : negligible number

Error code 3

Code number	Contents
1X	Error during table operation
2X	With no problem

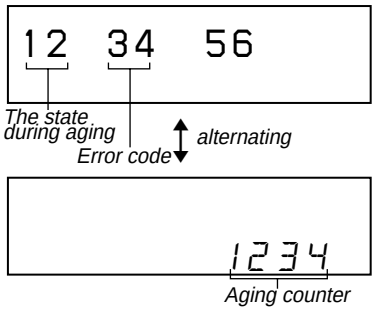
X : negligible number

Error code 4

Code number	Contents
0X	With no problem
1X	Error during table operation

X : negligible number

3. BD error



Code number	Contents
01	From chucking to TOC read
02	From chucking to TOC read
03	From TOC read to end of last track playback
04	From TOC read to end of last track playback
05	From end of last track playback to end of first track playback
06	From end of last track playback to end of first track playback

SHIPMENT MODE

- This mode is used for setting the unit to the shipment state. Do not execute it without a proper reason as it erases the memory of the title memo recorded by the customer.

Procedure1:

With the power ON, while pressing the TIME button and MEGA CONTROL button, press the I/⏻ button.
Rotate the DISC/ALBUM/CHARACTER dial, select "Ship Mode" and press the dial. "-OFF-" is displayed and the standby mode is automaticaly entered.

Procedure2:

With the power ON, while pressing the ARTIST MODE button and ▷ button, press the +100 button. "-OFF-" is displayed and the standby mode is automatically entered.

DOOR POP UP AGING MODE

- This mode is used for performing aging of the CD pop up part and door open/close.
  It is used for checking if operations are performed normally.

Procedure1:

1. With the power ON, while pressing the TIME button and MEGA CONTROL button, press the I/⏻ button.
2. Rotate the DISC/ALBUM/CHARACTER dial, select "CDM Test"and press the dial.
3. Rotate the DISC/ALBUM/CHARACTER dial, select "DoorPopup Aging" and press the dial.
4. Aging starts, and door open/close and up/down operations of the pop up part are performed continuously.
5. To end this mode, press the I/⏻ button.

Procedure2:

1. With the power ON, while pressing the TOP ARTIST 3 button and ▷ button, press the +100 button.
2. Aging starts, and door open/close and up/down operations of the pop up part are performed continuously.
3. To end the mode, press the I/⏻ button.

ALL LIT MODE

- This mode is used for lighting the whole fluorescent indicator tubes and LEDs.

Procedure:

With the power ON, while pressing the TOP ARTIST4 and ▷ buttons, press the +100 button.
Both the fluorescent indicator tubes and LEDs will light up completely.
To end this mode, press the I/⏻ button.

MODEL NAME DISPLAY

- Model names can be displayed on the fluorescent indicator tube for checking the microprocessor model setting, etc.

Procedure:

With the power ON, while pressing the TOP ARTIST6 and ▷ buttons, press the +100 button.
The model name is displayed on the fluorescent indicator tube.
To end this mode, press the I/⏻ button.

SPRAY MODE

- This mode is used for the electrical adjustments.
  Refer to the sedtion on Electrical Adjustment.

ADJ Mode

1. Turn ON the power of the unit, set disc to disc table, and perform chucking.
2. Disconnect the power supply plug from the outlet.
3. To set ADJ mode, connect the test point (ADJ) of the MAIN board to Ground, and connect the power supply plug to the outlet.

In this mode, table rotation and loading operations are not performed because it is taken that the disc has already been chucked.

Note: The same operations are also performed in the following when the test point (ADJ) is connected to Ground after turning on the power.

- Direct search (movement of sledding motor) is not performed during accessing
- Ignored even when GFS becomes L
- Ignored even when the Q data cannot be read
- Focus gain does not decrease

To end the ADJ mode

1. Press the I/⏻ button and disconnect the plug.
2. Remove the wire between ADJ and GND.

Key and Display Check Mode

To set this mode, connect the test point (AFADJ) on the MAIN board to Ground, and connect the power supply plug to the outlet.

Note: When this mode is executed, all title memos recorded will be erased.

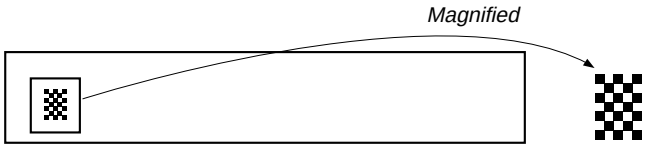
- When this button is pressed, “line # No. #” will be displayed. However, these will not be displayed for the following special buttons. However, these will not be displayed for the following special buttons.

■ (stop) button: FL segment check
(Refer to FL Tube Check Patterns)
❚❚ (pause) button: FL grid check
(Refer to FL Tube Check Patterns)
The ❚❚ LED also lights up simultaneously.
▷ (play) button: All FL segment and grid will light up.
▷ LED also lights up simultaneously.
TIMER switch: When the switch position is PLAY, the STANDBY LED lights up. It goes OFF when set to OFF .

Each time this button is pressed, the value of the “Got ## keys” increases. Buttons pressed once will not be counted when pressed again.

FL Tube Check Patterns

Segment check



Grid check

- When the jog dial and AMS is rotated to the right, the TOP ARTIST LEDs light up in the order of 8 → 7..1 → HISTORY ALBUM SELECT → MEGA CONTROL → ❚❚ → ▷ → ARTIST MODE → 8.
- When the jog dial and AMS is rotated to the left, the TOP ARTIST LEDs light up in the order of 1 → 2..8 → ARTIST MODE → ▷ → ❚❚ → MEGA CONTROL ALBUM SELECT → HISTORY → 1.

- Abbreviation
  FL: Fluorescent Indicator Tube

To end the ADJ mode

1. Disconnect the plug.
2. Remove the wire between AFADJ and GND.

Adjustment Location: MAIN board (See page 28)

SECTION 5
ADJUSTMENTS

Mechanical Adjustments

Pop Up Mechanism Adjustment

1. Turn on the power and set the disc to number 24.
2. With the power ON, while pres sing the TIME and MEGA CONTROL buttons, press the I/⏻ button to enter the test mode.
3. Rotate the JOG dial and select “CDM Test”.
   Press the JOG dial.
4. Rotate the JOG dial and select the mechanism adjustment mode. (“Mech Adjust” is displayed.)
   Press the JOG dial.
5. Keep pressing the TOP ARTIST 1 button to operate the loading mechanism, and continue pressing until the disc table locks. (Fig. 1)
6. Keep pressing the TOP ARTIST 2 button to raise the pop up part.
7. Loosen the adjusting screw, move the screwdriver left and right until the lever (POP UP) does not touch the slit wall, and secure the screw. (Fig. 2)

The following buttons have special functions in this mode.

TOP ARTIST 1 button: Loading mechanism IN operation
TOP ARTIST 5 button: Loading mechanism OUT operation
TOP ARTIST 2 button: Pop up part UP operation
TOP ARTIST 6 button: Pop up part DOWN operation

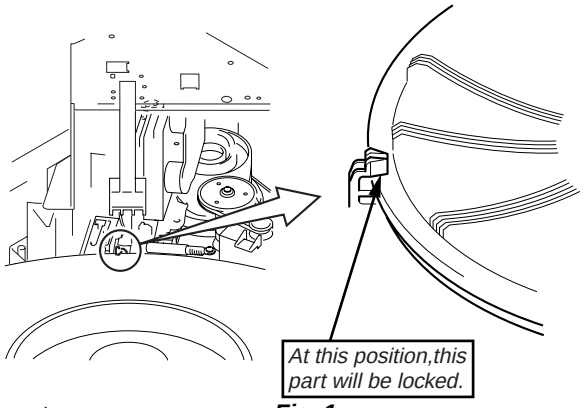


Fig. 1

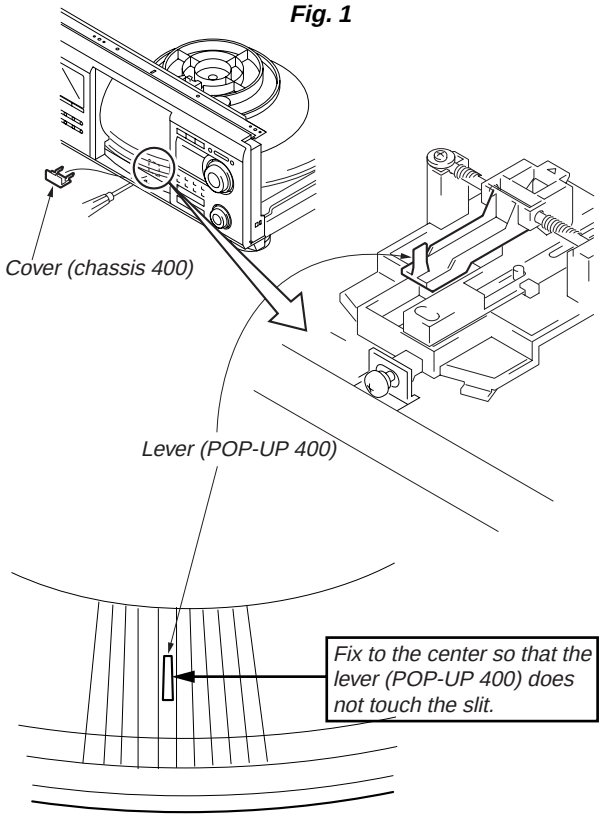


Fig. 2

Table Sensor Adjustment

1. Enter the CDM Test mode and select “Mech Adjust” with the JOG dial, and press the dial.
2. Press the TOP ARTIST 1 button to operate the loading mechanism, and continue pressing until the disc table locks. (Fig. 3)
3. Loosen the fixing screw and move the holder so that both PLAY button LED (green) and the ALBUM SELECT button LED (green) light.
   If the holder is not in the correct position, the MEGA CONTROL button LED (orange) or the PAUSE button LED (orange) lights.
4. Moving the disc table right and left with a hand after the screw is fixed, the table will move by the play of a disc table. If the LEDs light up alternately, the adjustment will be performed correctly. (Fig. 4)

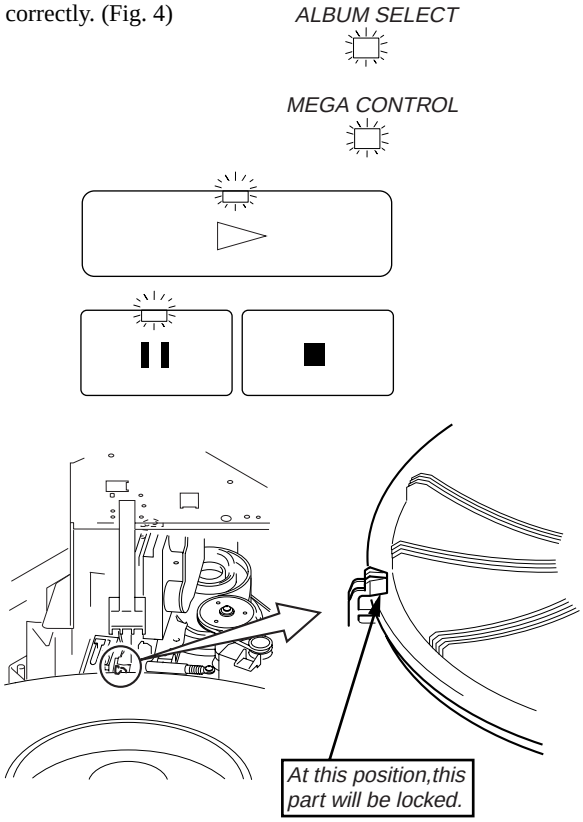


Fig. 3

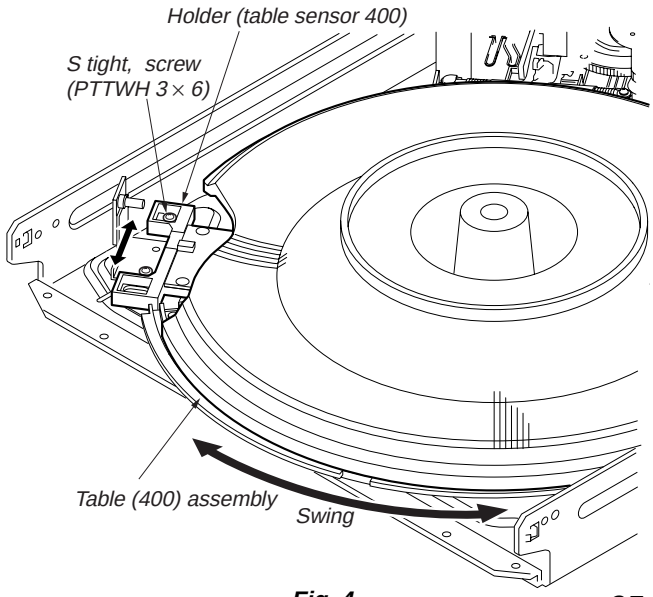
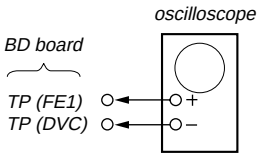


Fig. 4

Electrical Adjustment

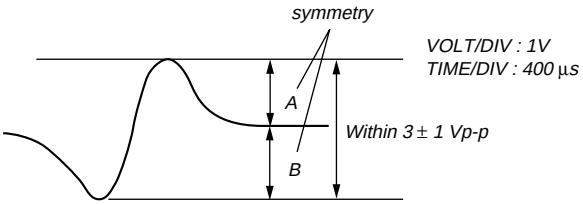
Note:
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



Procedure :
1. Chuck the disc (YEDS-18) beforehand.
2. Connect oscilloscope to test point TP (FE1) on BD board.
3. With the power ON, while pressing the TIME and MEGA CONTROL buttons, press the I/⏻ button.
   Rotate the DISC/ALBUM/CHARACTER dial, select "BU Test" and press the dial.
4. Rotate the DISC/ALBUM/CHARACTER dial, and select "bdt S CURVE". Press the dial "LD AL" is displayed.
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1 Vp-p.

S-curve waveform

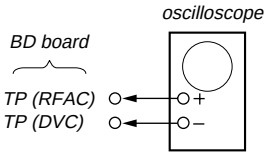


6. Pressing the MENU/NO button stops the output of the waveform (S CURVE). "bdt S CURVE"is displayed.
7. To end this mode, press the I/⏻ button.

Note : • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

Adjustment Location: BD board (See page 28)

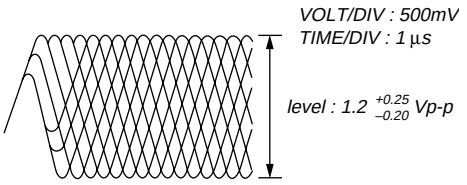
RF Level Check



Procedure :
1. Connect oscilloscope to test point TP (RFAC) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note : A clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

RF signal waveform

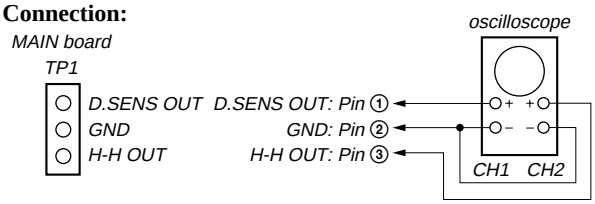


Adjustment Location: BD board (See page 28)

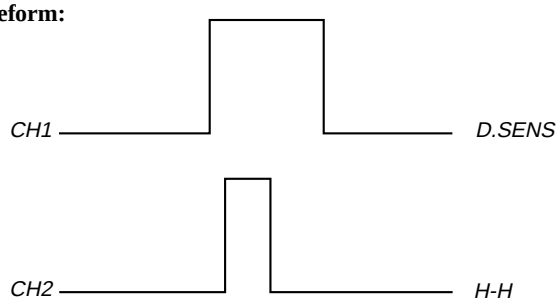
Disc Sensor Adjustment

Be sure to perform this adjustment after sensor adjustment in MECHANICAL ADJUSTMENT.

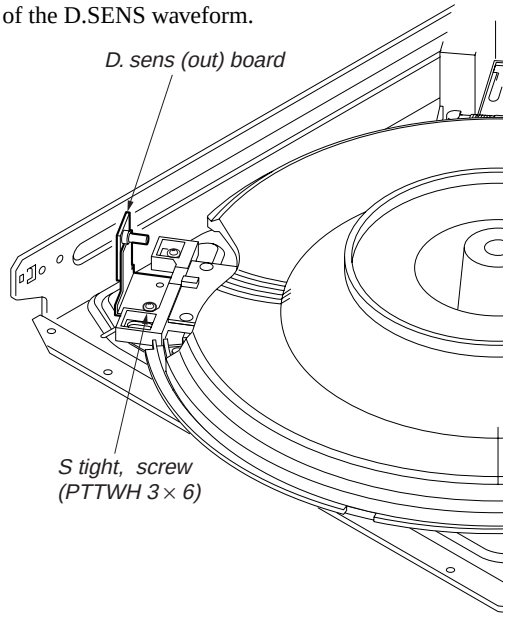
Connection:

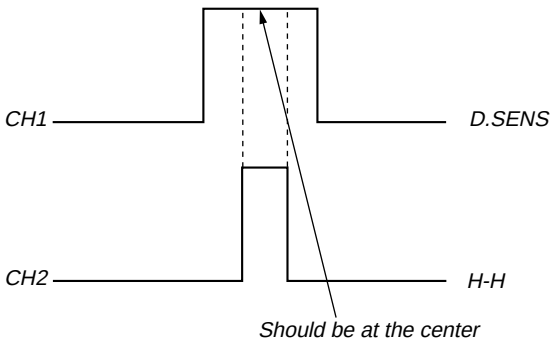


Waveform:

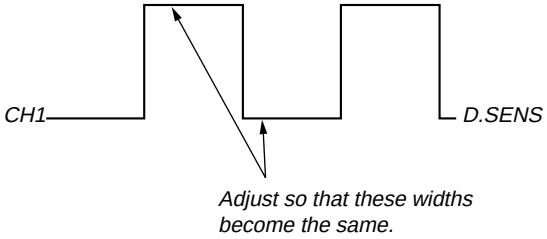


1. Connect the oscilloscope to Pins ①, ②, and ③ of TP1 of the MAIN board.
2. Check that no discs are loaded in the unit.
3. With the power ON, while pressing the TIME and MEGA CONTROL buttons, press the I/⏻ button. Rotate the DISC/ALBUM/CHARACTER dial, select "CDM Test" and press the dial.
   Rotate the DISC/ALBUM/CHARACTER dial and select "TableRotation" and press the dial.
   The disc table starts to rotate in the clockwise direction.
4. Loosen the fixing screw, move the mounting board (SENSOR), and secure the mounting board (SENSOR) at the point the H portion of the H-H waveform comes the center of the H portion of the D.SENS waveform.





5. Rotate the DISC/ALBUM/CHARACTER knob in the counterclockwise direction and the disc table starts to rotate in the same direction. Check that the waveform at this time is the same as that in step 4. If larger by a considerable extent, rotate the DISC/ALBUM/CHARACTER knob in the clockwise direction and the disc table starts to rotate in the same direction. Repeat from step 4.
6. Rotate RV501 of the MAIN board and adjust so that the H and L portions of the D.S waveform become the same.



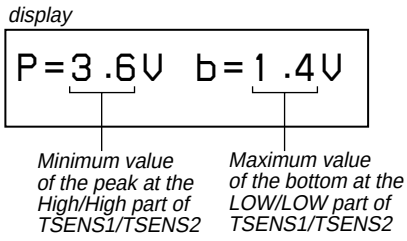
Adjustment Location: MAIN board (See page 28)

Spray Mode

- This mode is used for the measurement of the table sensor signal outputs characteristics.

Procedure :

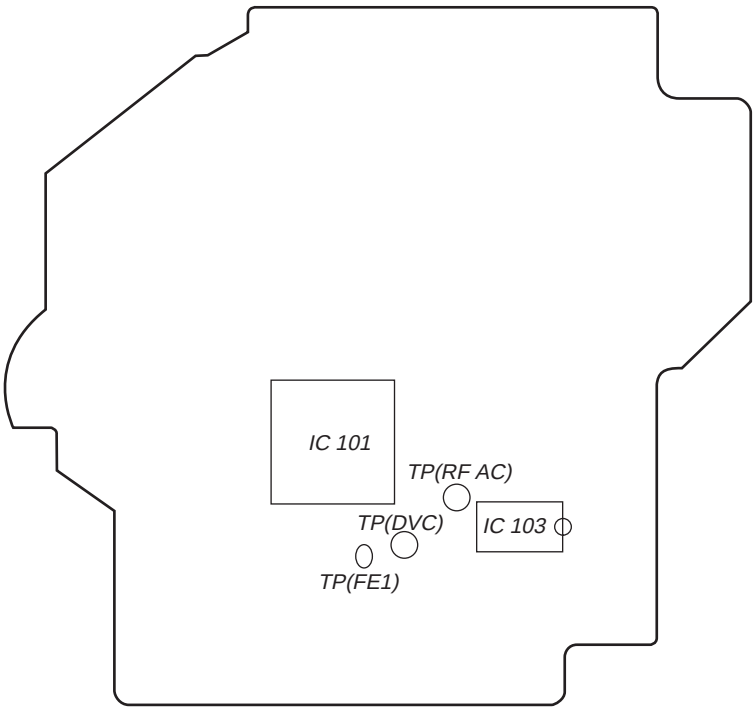
1. Check that no discs are loaded in the unit.
   With the power ON, while pressing the TOP ARTIAT 8 and ▷ buttons, press the +100 button.
   "Spray Mode" is displayed.
2. Press the ▷ button to start the measurement. "Now ⋯ing" is displayed during the measurement of one rotarion.
3. The result of the measurement is displayed as below.



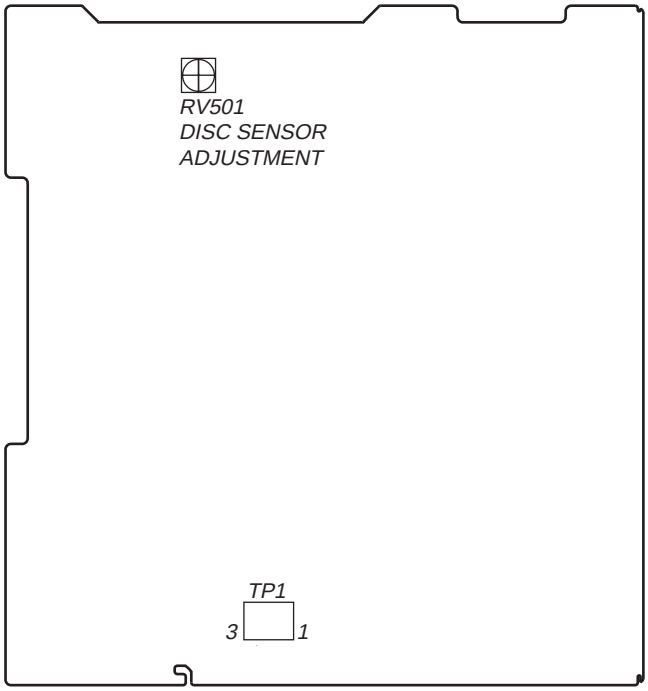
4. To end this mode, press the I/⏻ button.

Adjustment Location :

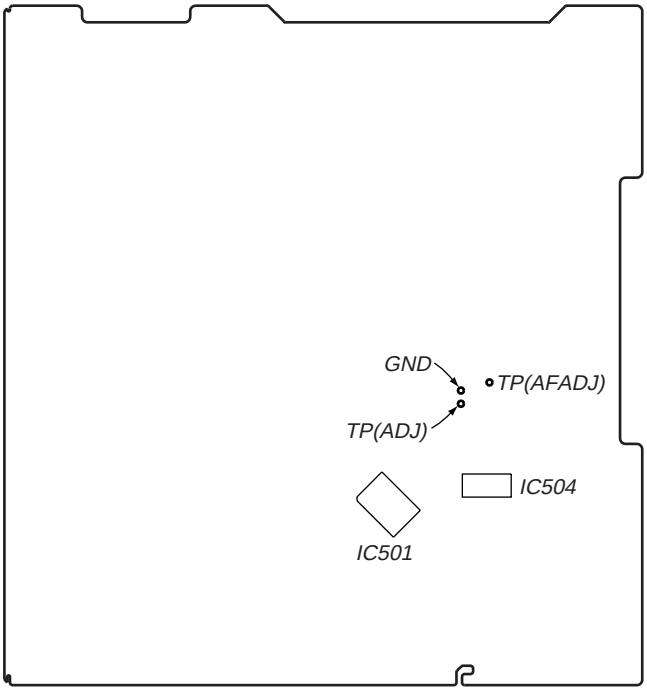
[BD BOARD] – Conductor Side –



[MAIN BOARD] – Component Side –



– Conductor Side –



SECTION 6
DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For Schematic Diagrams.
Note:
- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

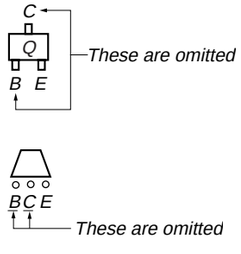
- ▬ : B+ Line.
- ▬ ▬ : B– Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : STOP
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
  ⇨ : digital out
- Abbreviation
  CND : Canadian model

For Printed Wiring Boards.
Note:
- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ○ : Through hole.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

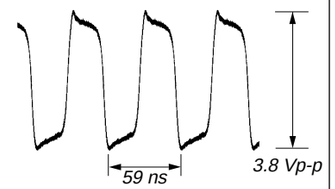
- **Indication of transistor**



- **Waveforms**

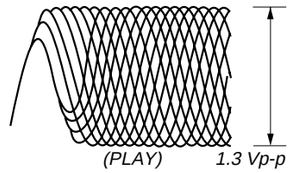
– BD Board –

① **IC104 ⑥③ XO**



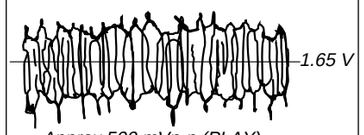
1 V/DIV, 20 ns/DIV

② **IC103 ⑮ (RFAC)**



500 mV/DIV, 1 µs/DIV

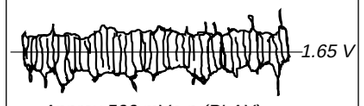
③ **IC101 ④① TE**



Approx 500 mVp-p (PLAY)

200 mV/DIV, 20 ms/DIV

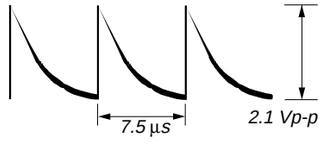
④ **IC101 ③⑨ FE**



Approx 500 mVp-p (PLAY)

200 mV/DIV, 4 ms/DIV

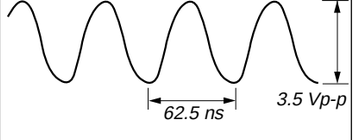
⑤ **IC101 ② MDP**



1 V/DIV, 4 µs/DIV

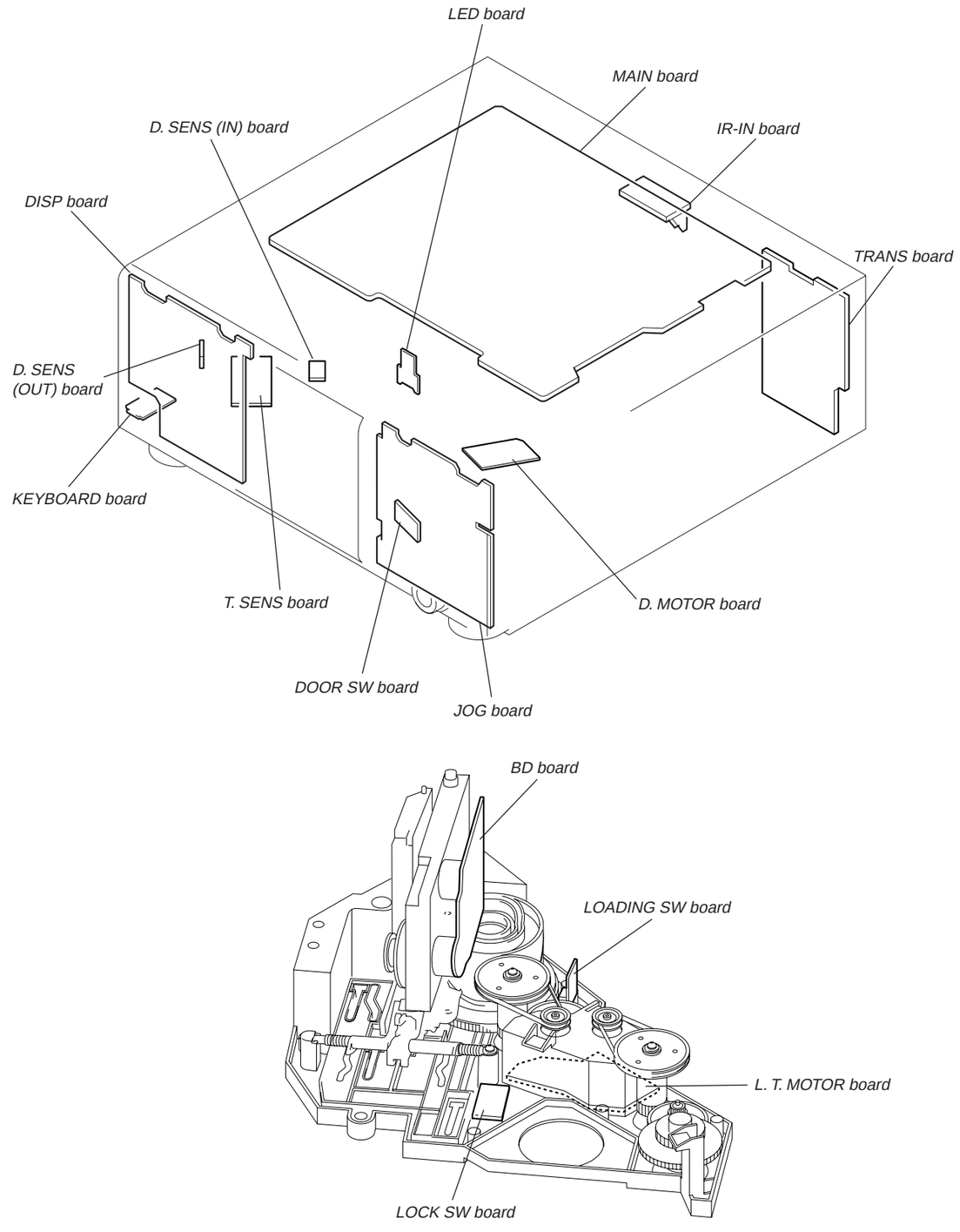
– MAIN Board –

⑥ **IC501 ③⑧ X2**

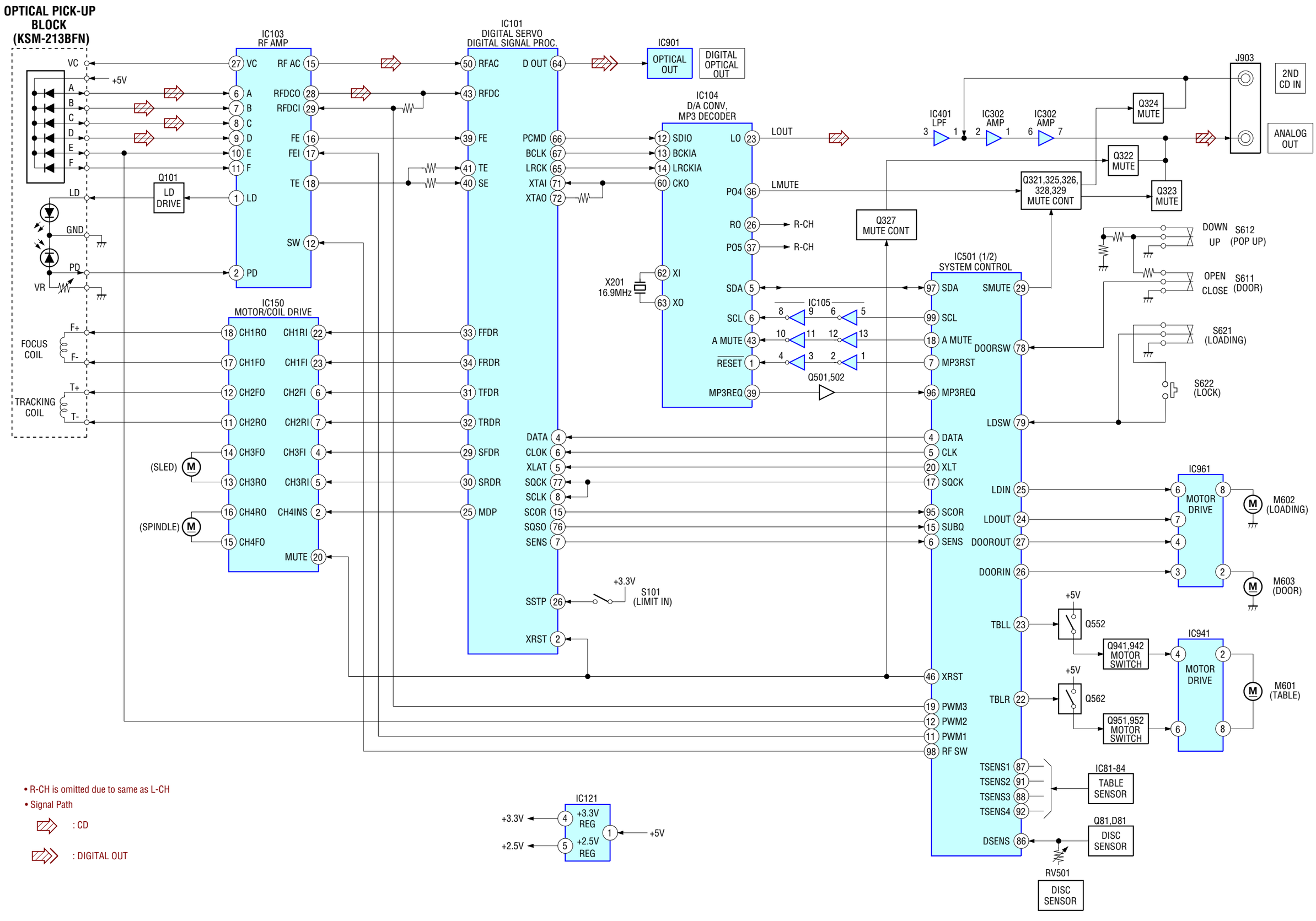


1 V/DIV, 20 ns/DIV

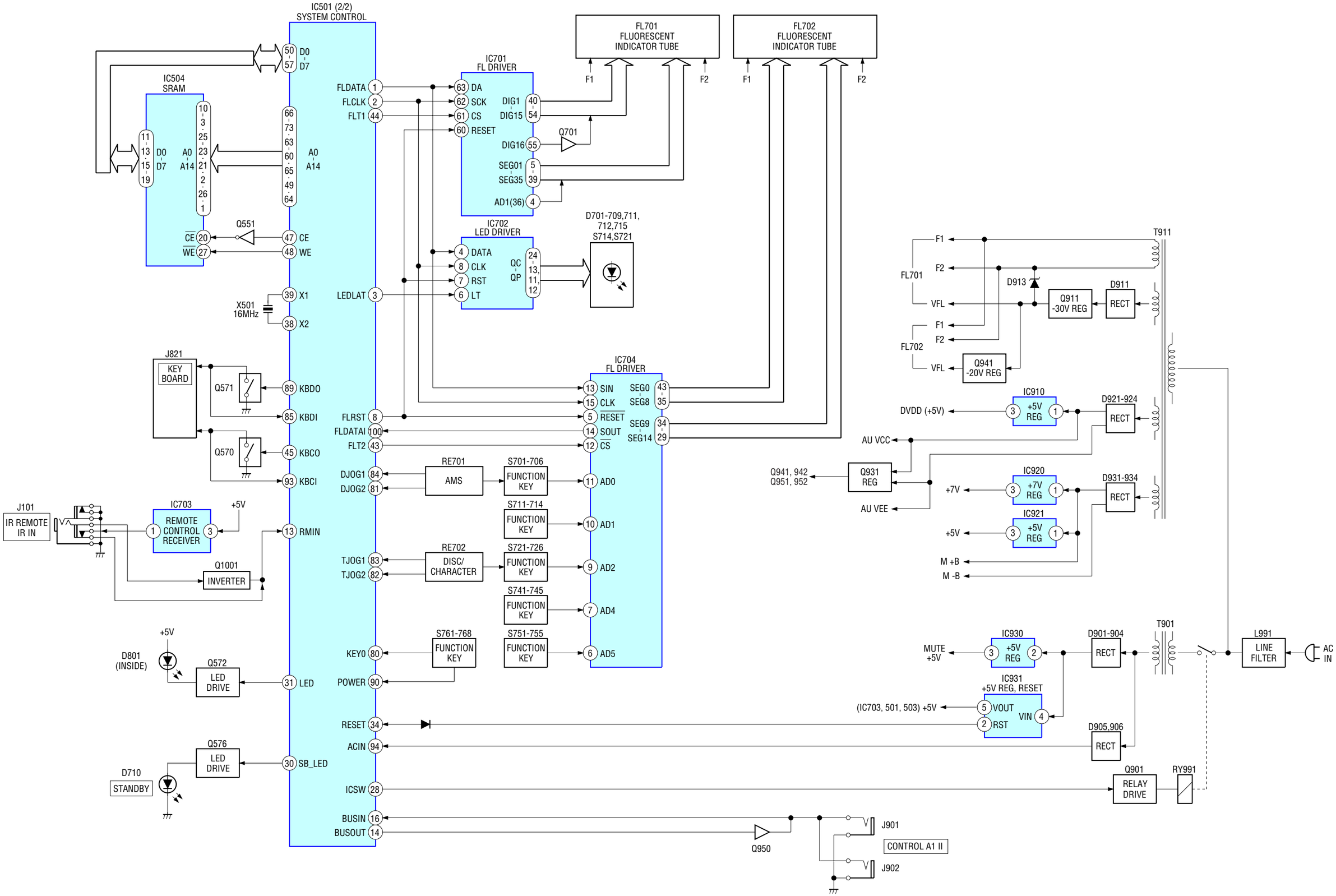
- **Circuit Boards Location**



6-1. BLOCK DIAGRAM — BD SECTION —



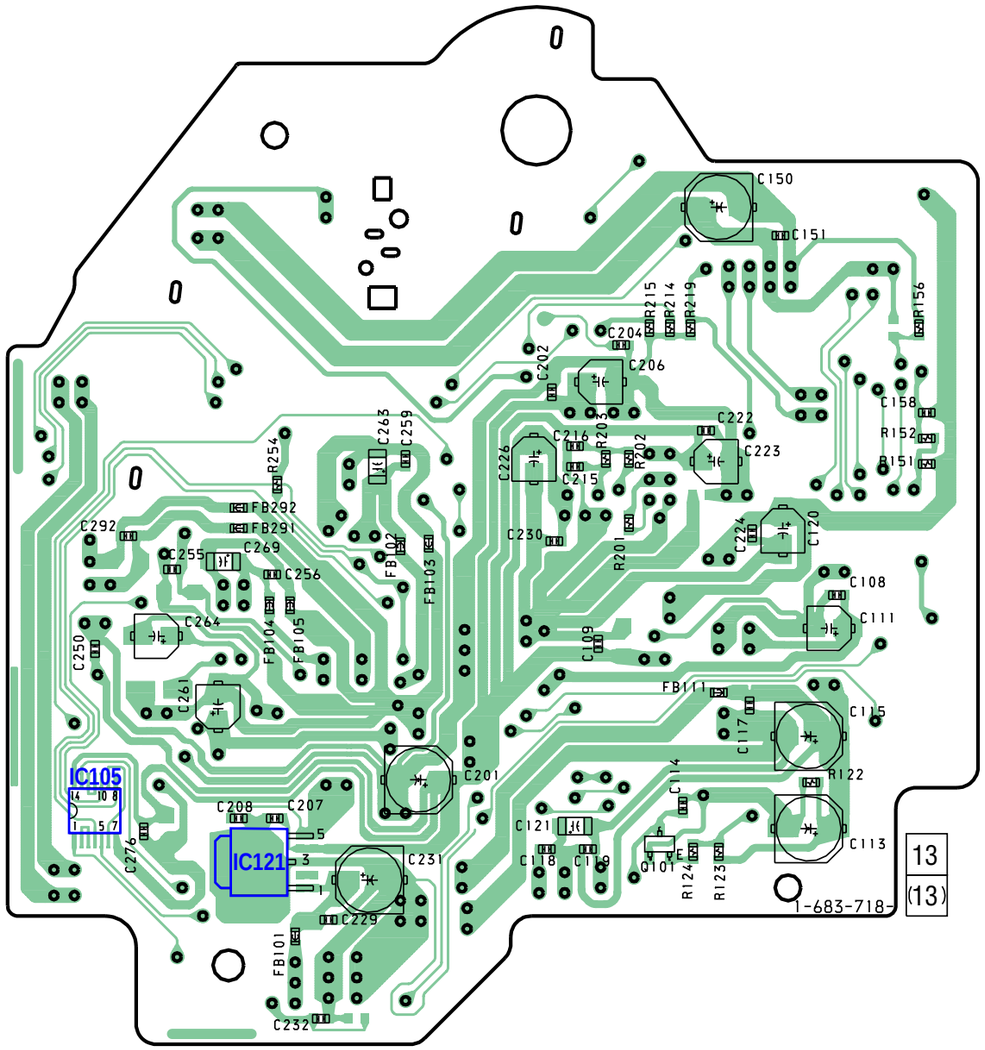
— MAIN SECTION —



6-2. PRINTED WIRING BOARD — BD SECTION —

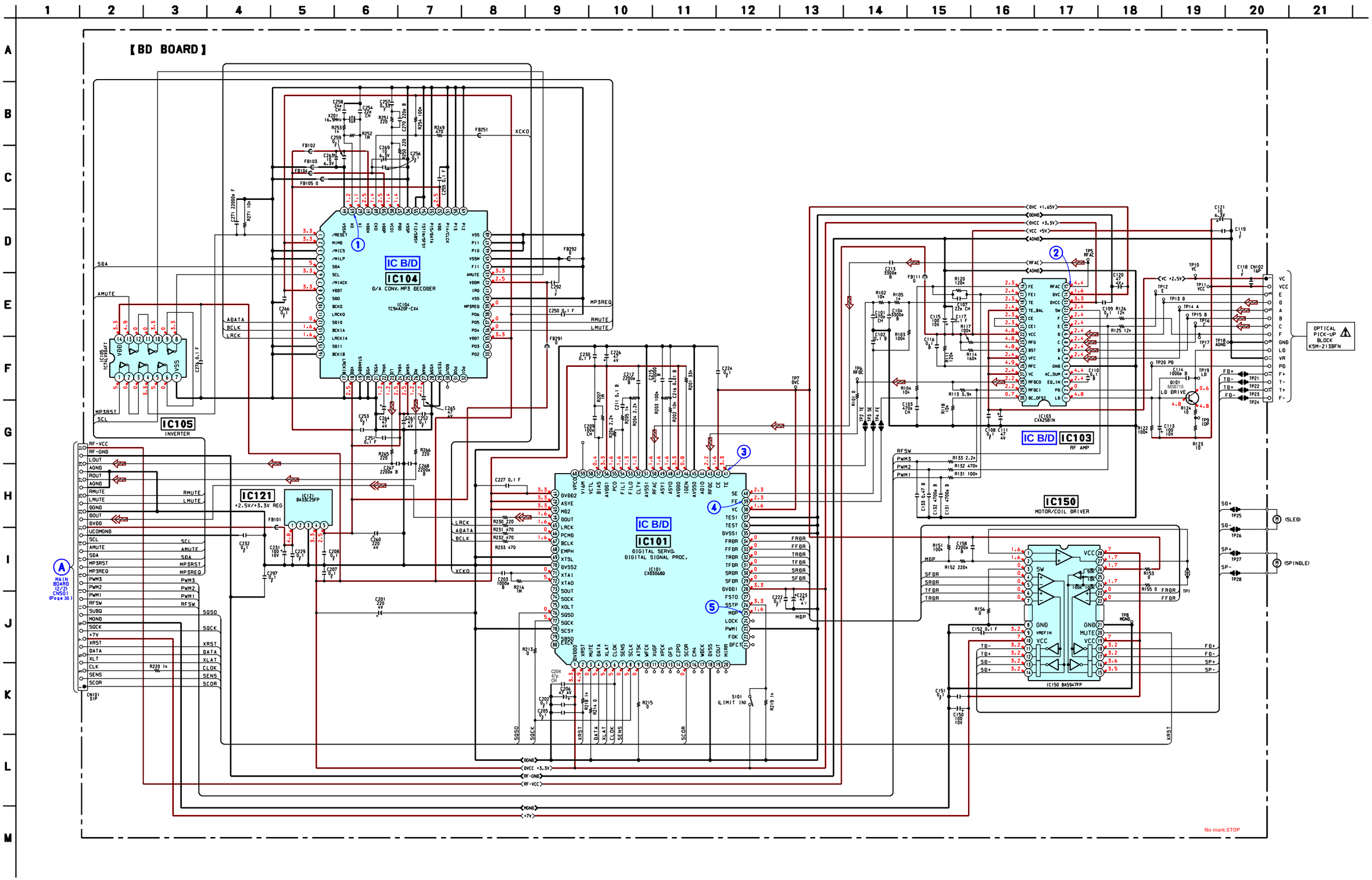
• See page 29 for Circuit Boards Location. :Uses unleaded solder.

【BD BOARD】(SIDE A)



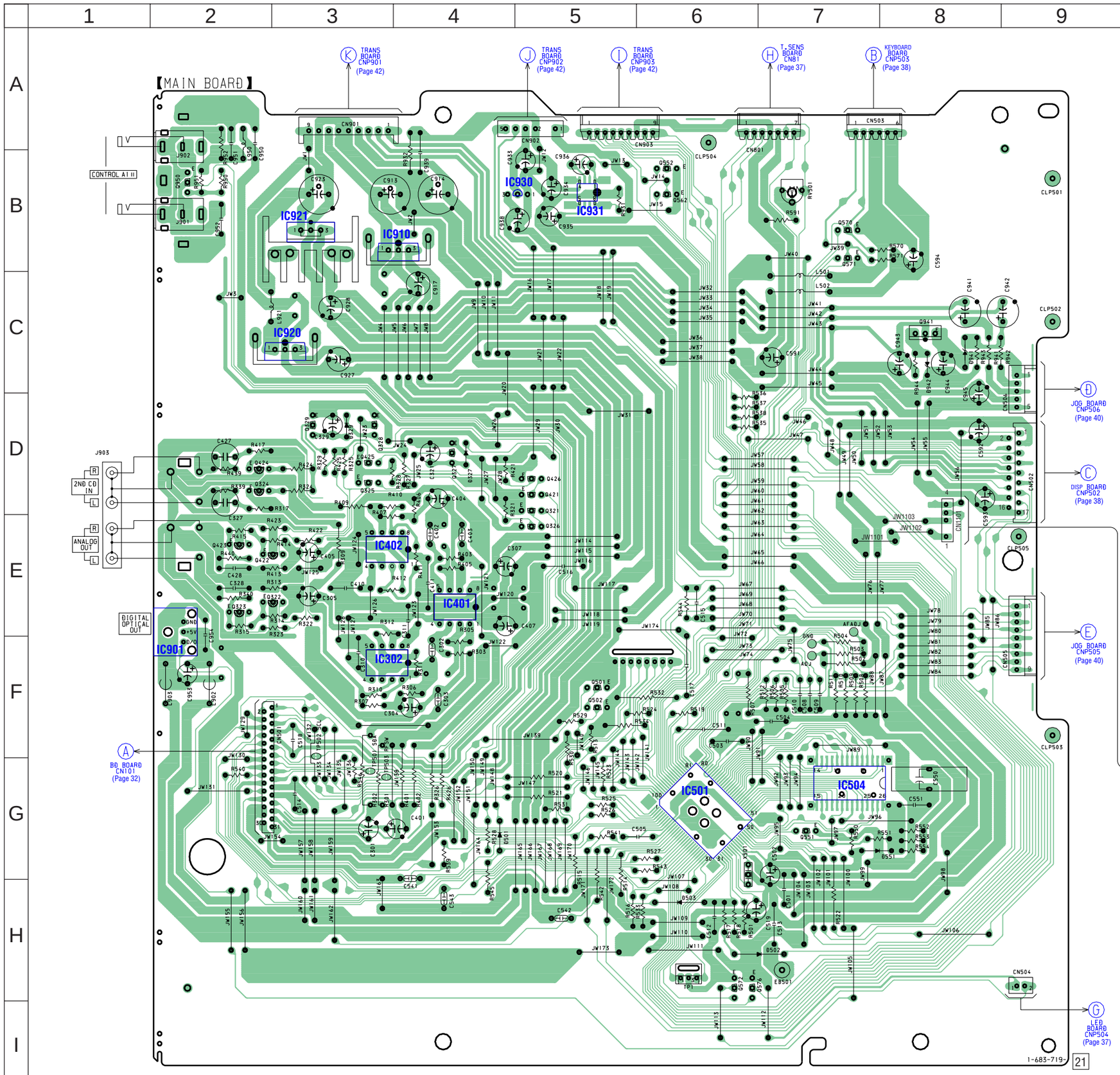
6-3. SCHEMATIC DIAGRAM — BD SECTION —

• See page 29 for Waveforms. • See page 44, 45 and 46 for IC Block Diagrams. • See page 47 for IC Pin Function Description.



6-4. PRINTED WIRING BOARD — MAIN SECTION —

• See page 29 for Circuit Boards Location. :Uses unleaded solder.

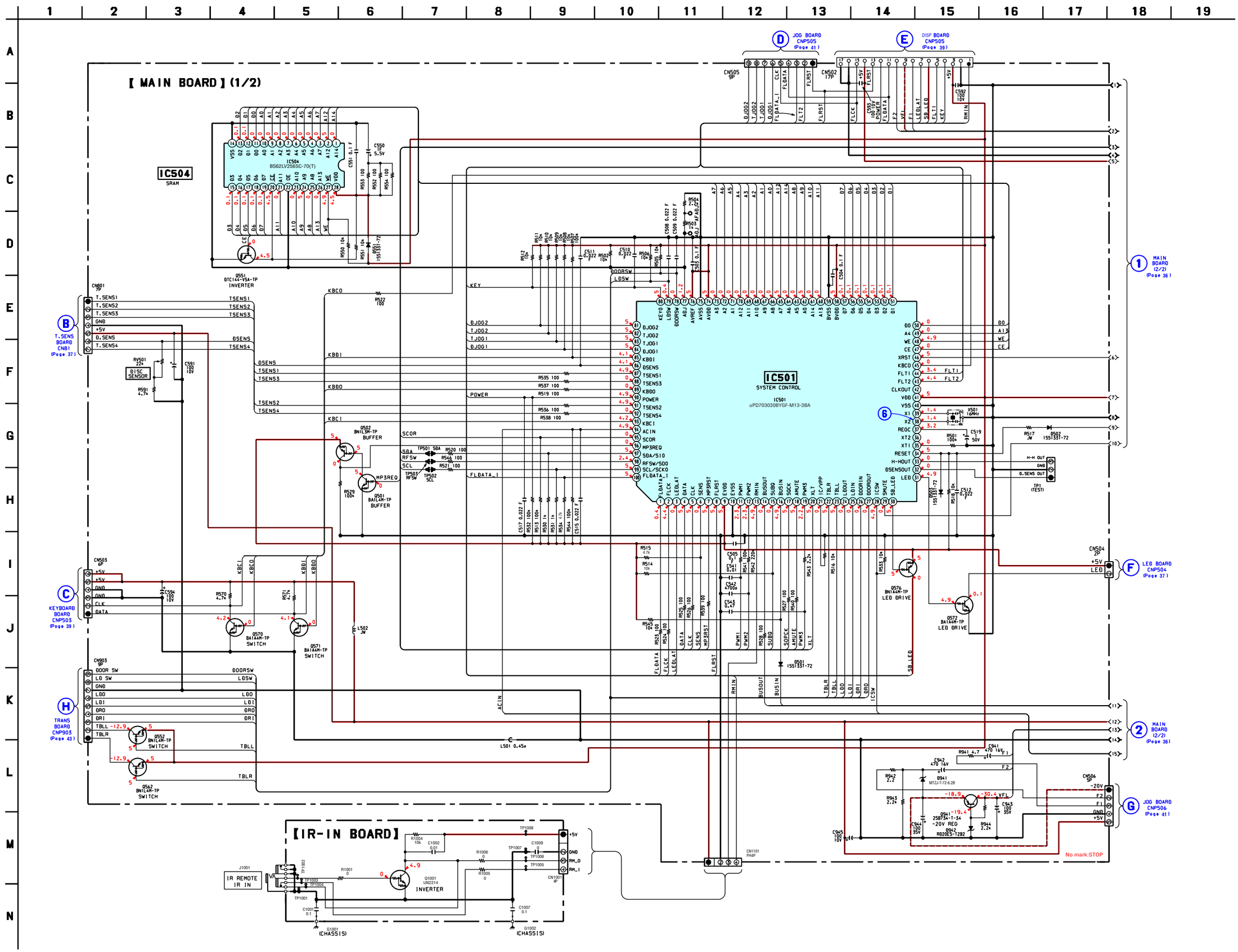


- **Semiconductor Location**

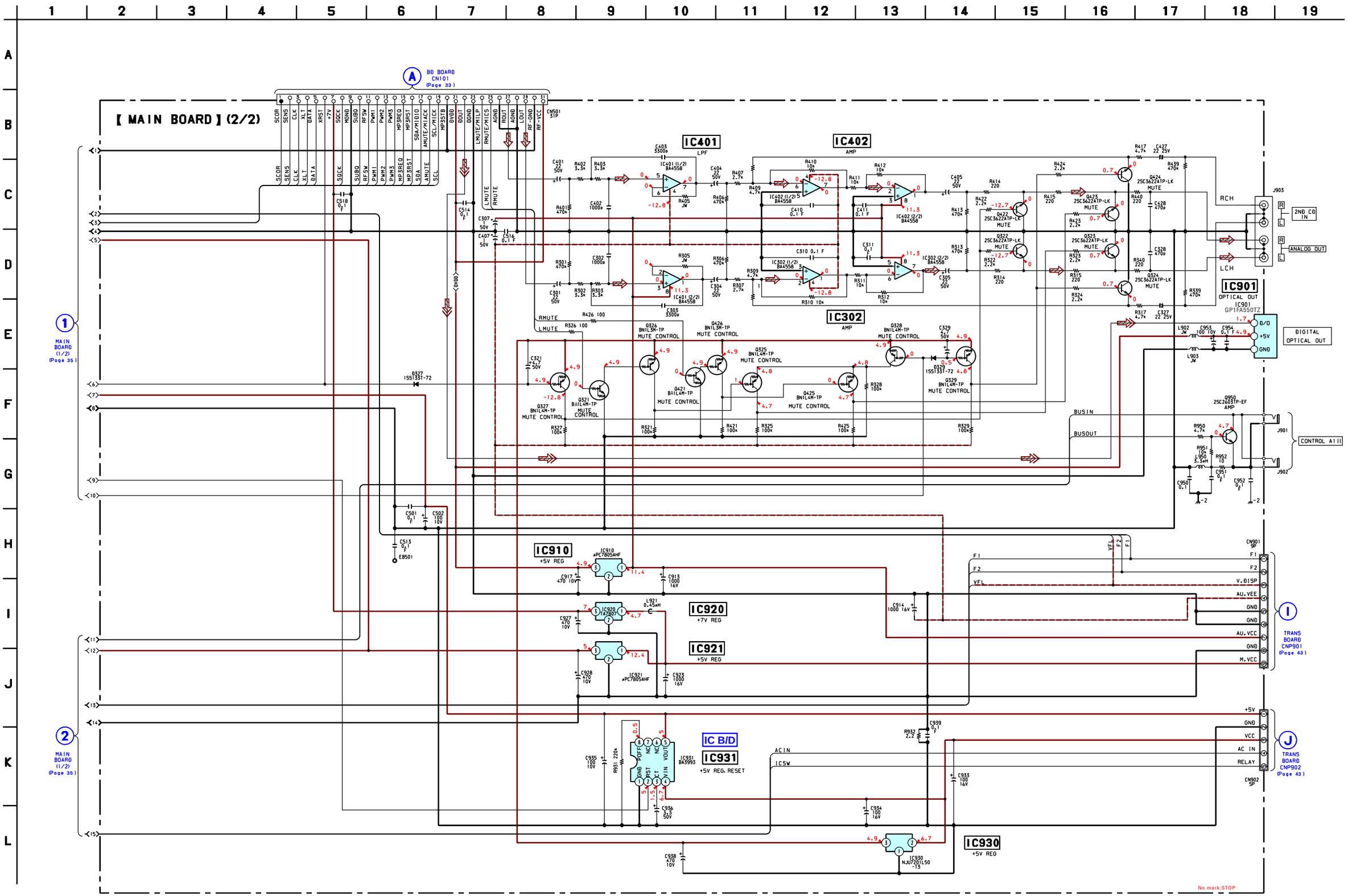
Ref. No.	Location
D327	D-4
D329	D-3
D501	G-4
D502	H-7
D503	H-6
D551	G-8
D941	C-8
D942	C-8
IC302	F-3
IC401	E-4
IC402	E-3
IC501	G-6
IC504	G-7
IC901	F-2
IC910	B-4
IC920	C-3
IC921	B-3
IC930	B-4
IC931	B-5
Q321	D-5
Q322	E-3
Q323	E-2
Q324	D-2
Q325	D-3
Q326	E-5
Q327	D-4
Q328	D-3
Q329	D-3
Q421	D-5
Q422	E-2
Q423	E-2
Q424	D-2
Q425	D-3
Q426	D-5
Q501	F-5
Q502	F-5
Q551	G-7
Q552	B-6
Q562	B-6
Q570	B-7
Q571	B-7
Q572	H-6
Q576	H-7
Q941	C-8
Q950	B-2
Q1001	H-10

6-5. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) —

• See page 29 for Waveforms. • See page 49 for IC Pin Function Description.



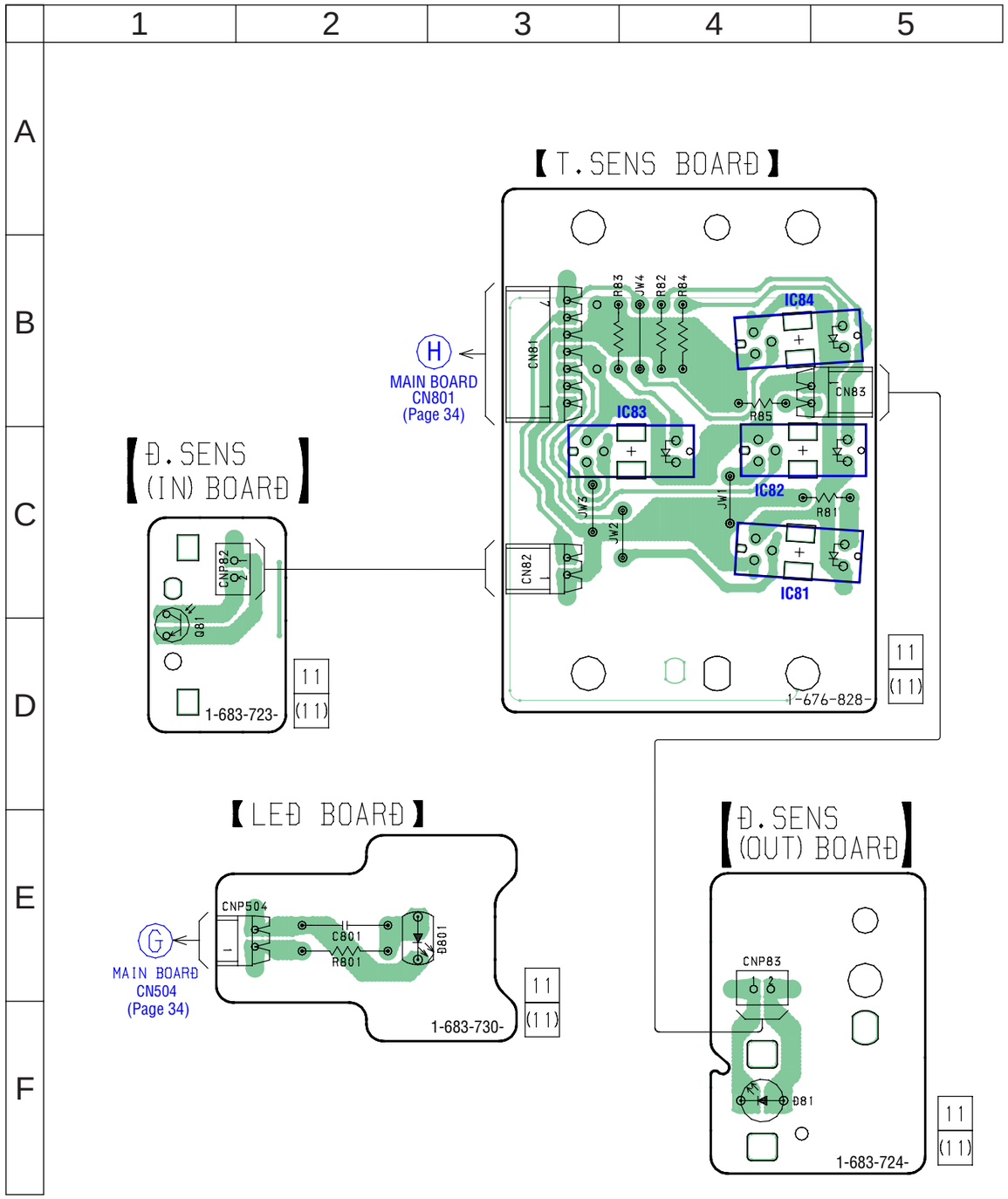
6-6. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) — • See page 45 for IC Block Diagrams.



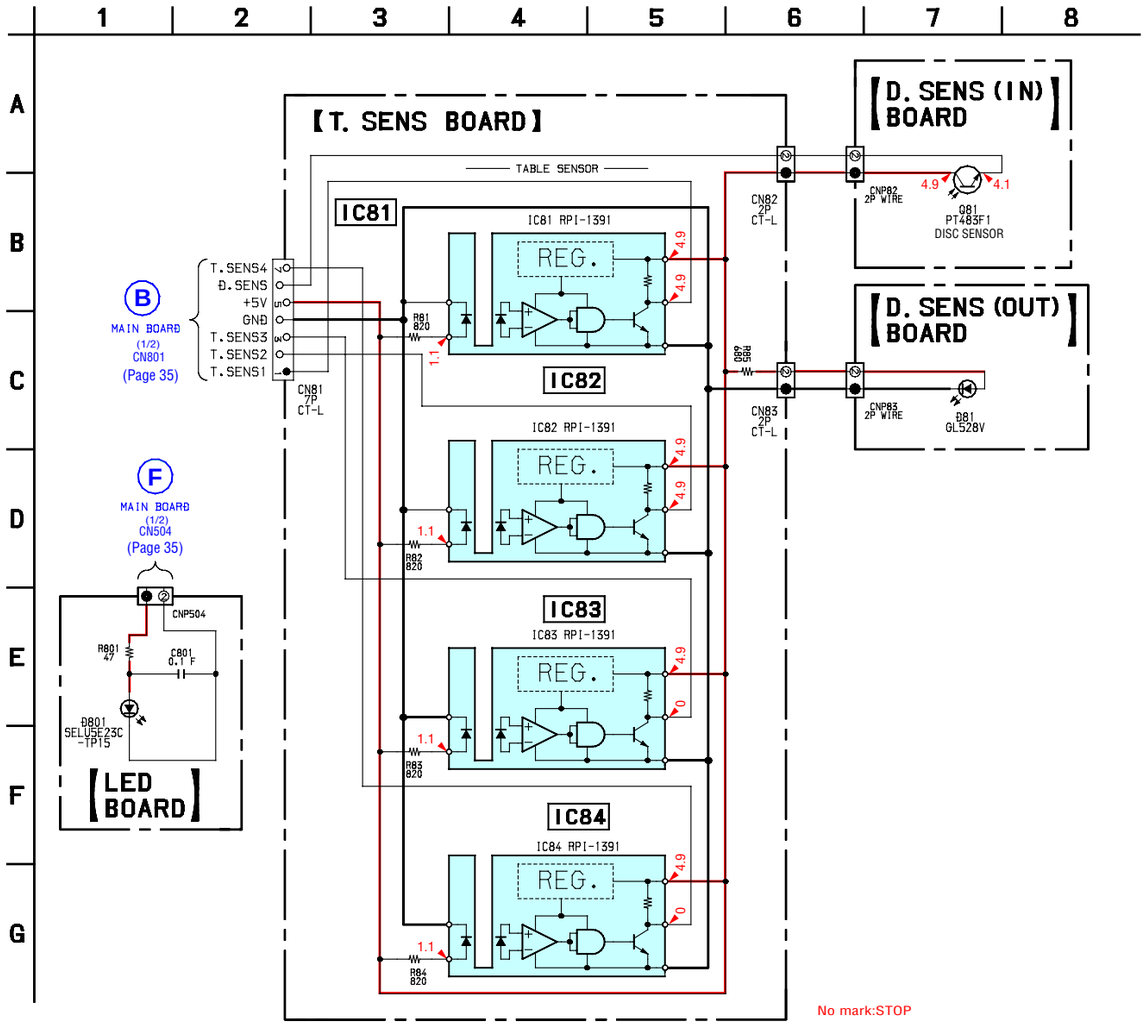
6-7. PRINTED WIRING BOARD — SENSOR SECTION —

• See page 29 for Circuit Boards Location.

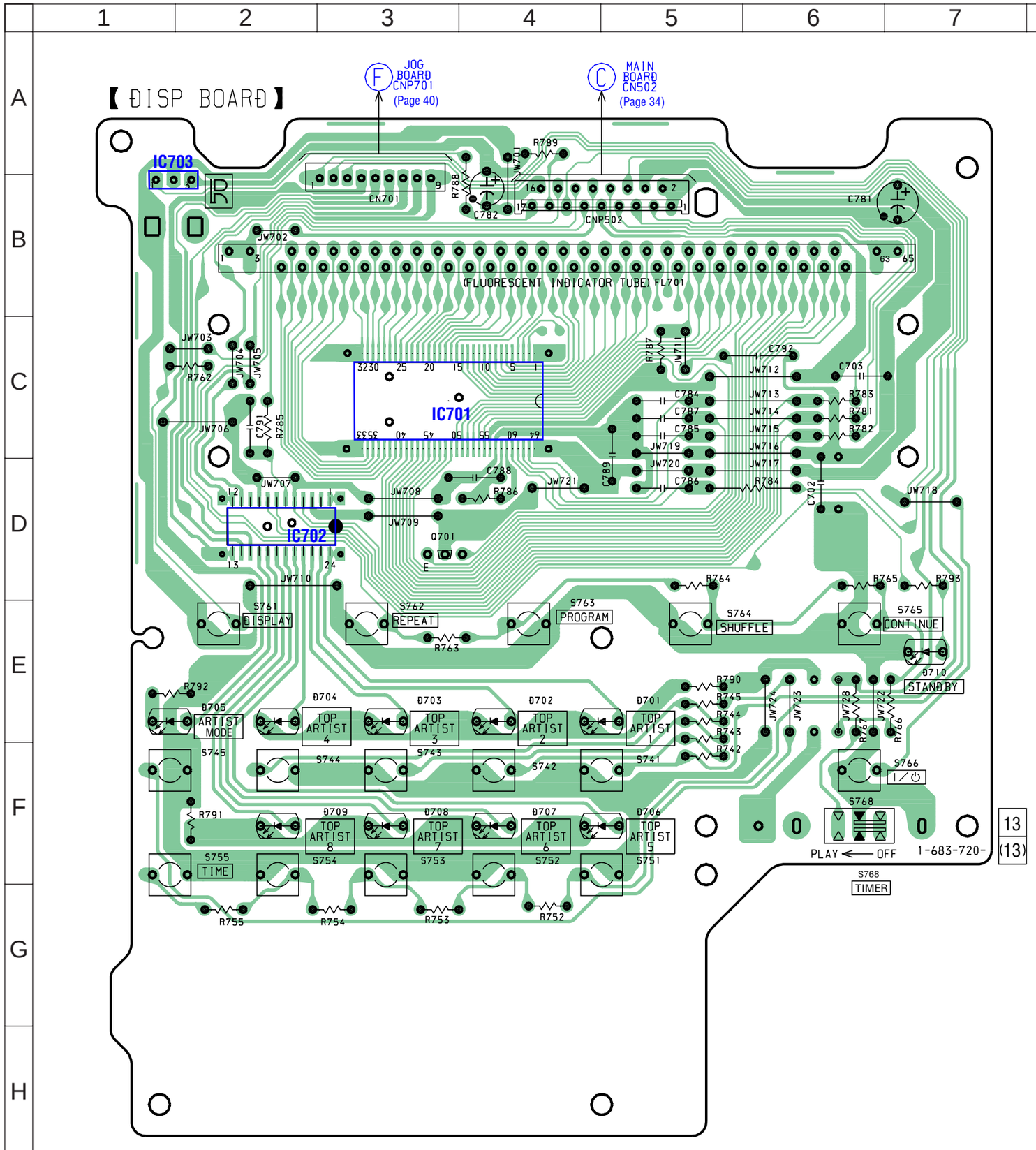
:Uses unleaded solder.



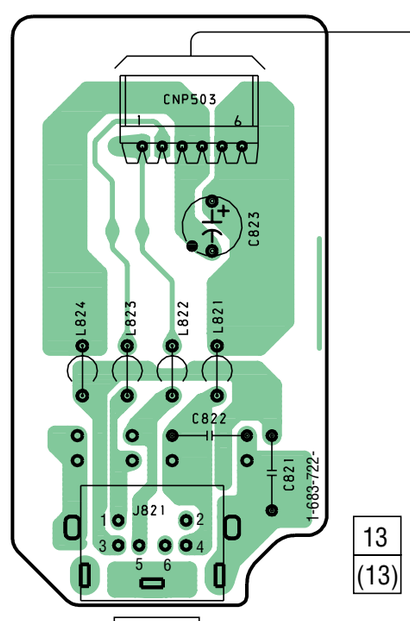
6-8. SCHEMATIC DIAGRAM — SENSOR SECTION —



6-9. PRINTED WIRING BOARD — DISPLAY SECTION — • See page 29 for Circuit Boards Location. :Uses unleaded solder.



【KEYBOARD BOARD】

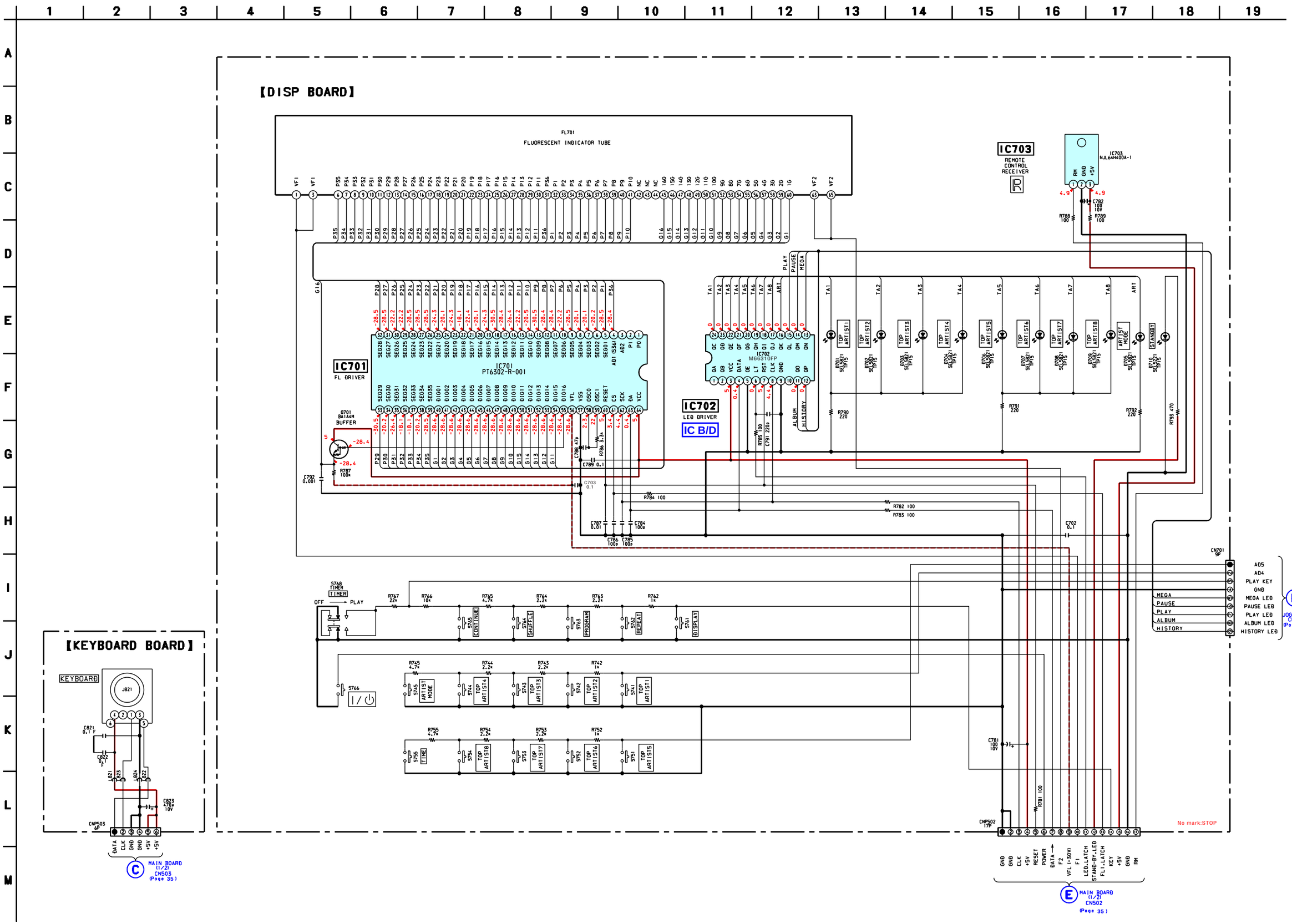


- **Semiconductor Location**

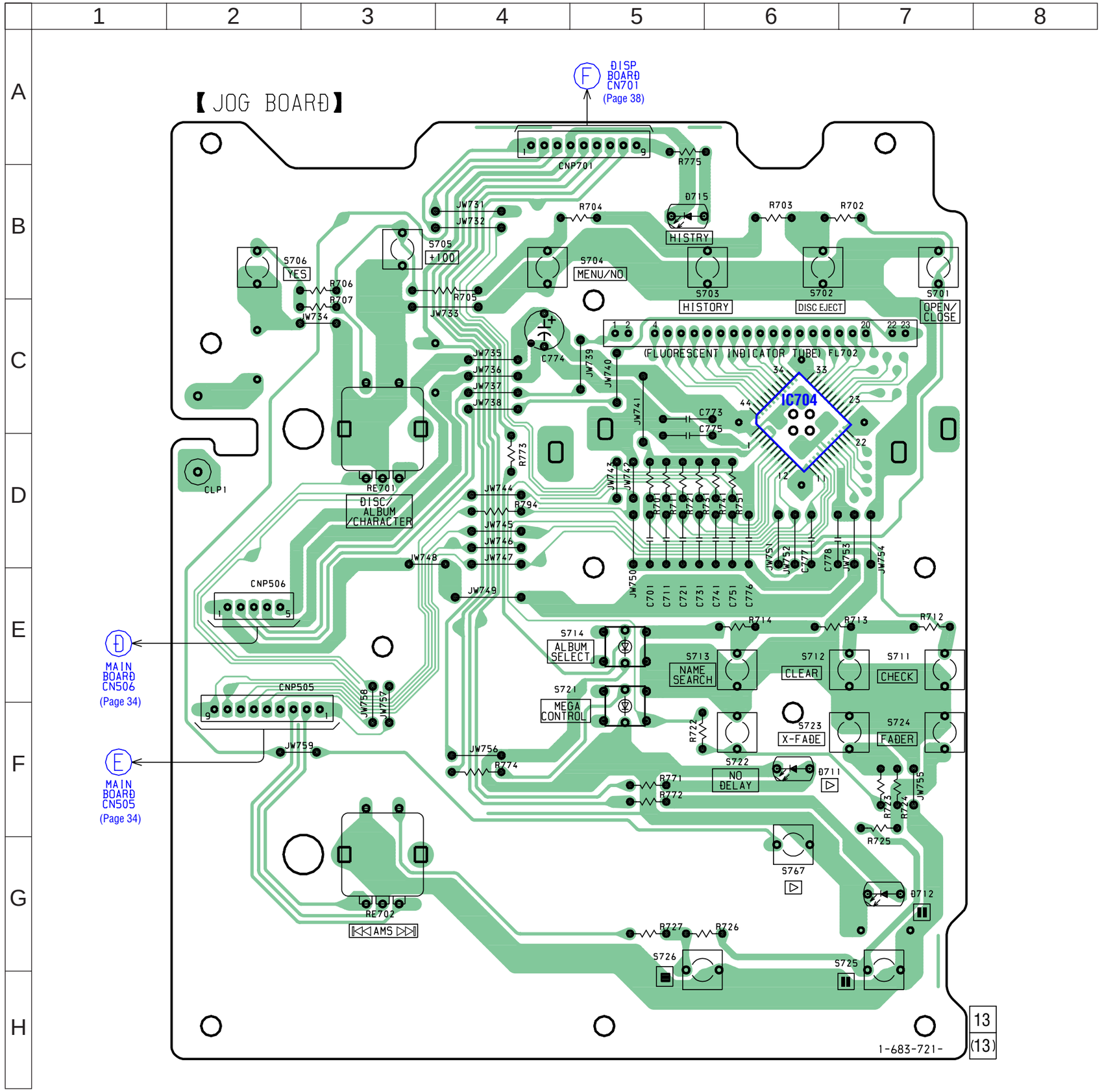
Ref. No.	Location
D701	E-5
D702	E-4
D703	E-3
D704	E-2
D705	E-2
D706	F-5
D707	F-4
D708	F-3
D709	F-2
D710	E-7
IC701	C-3
IC702	D-2
IC703	A-1
Q701	D-3

6-10. SCHEMATIC DIAGRAM — DISPLAY SECTION —

• See page 44 for IC Block Diagrams.

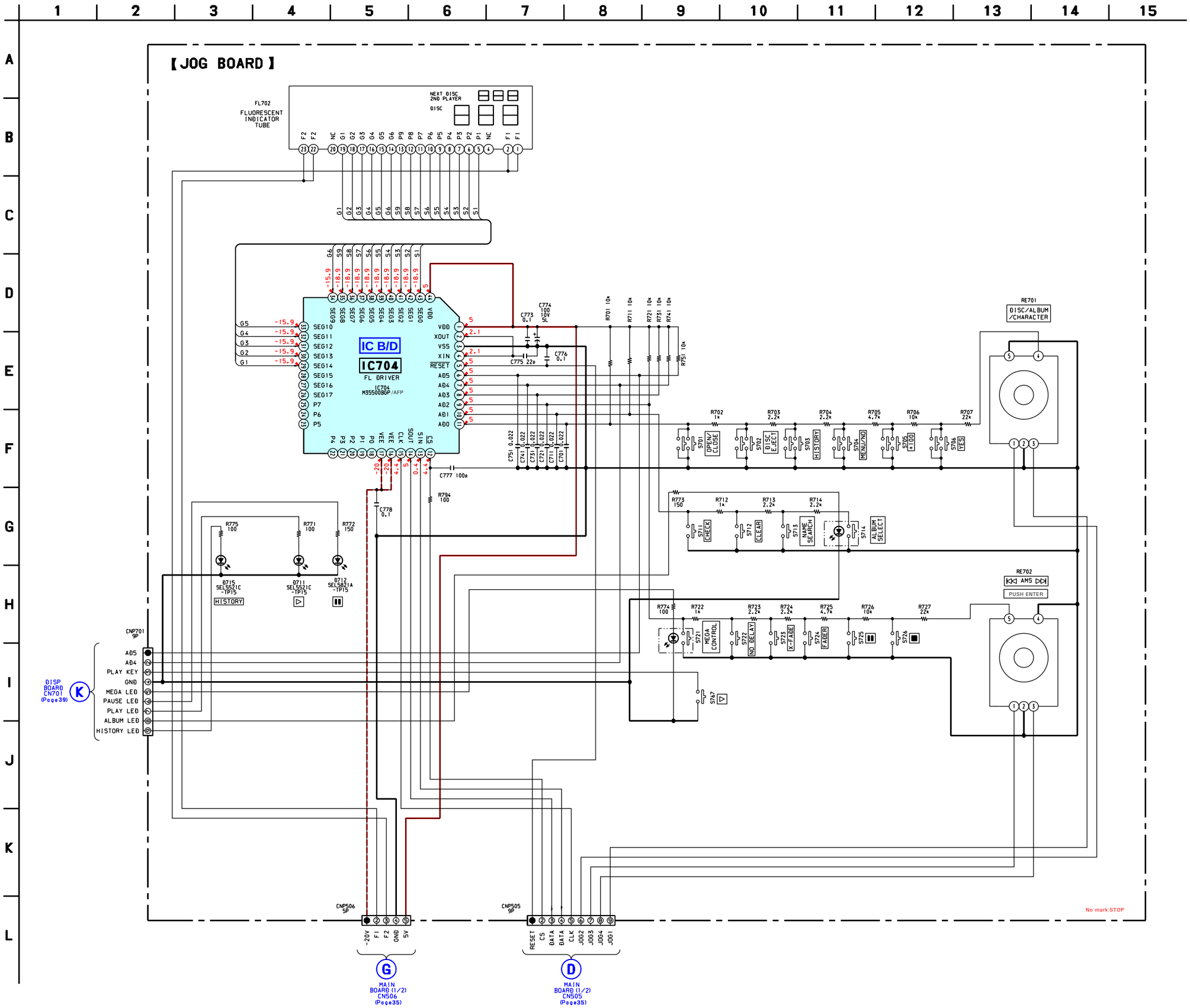


6-11. PRINTED WIRING BOARD — JOG SECTION — • See page 29 for Circuit Boards Location. :Uses unleaded solder.

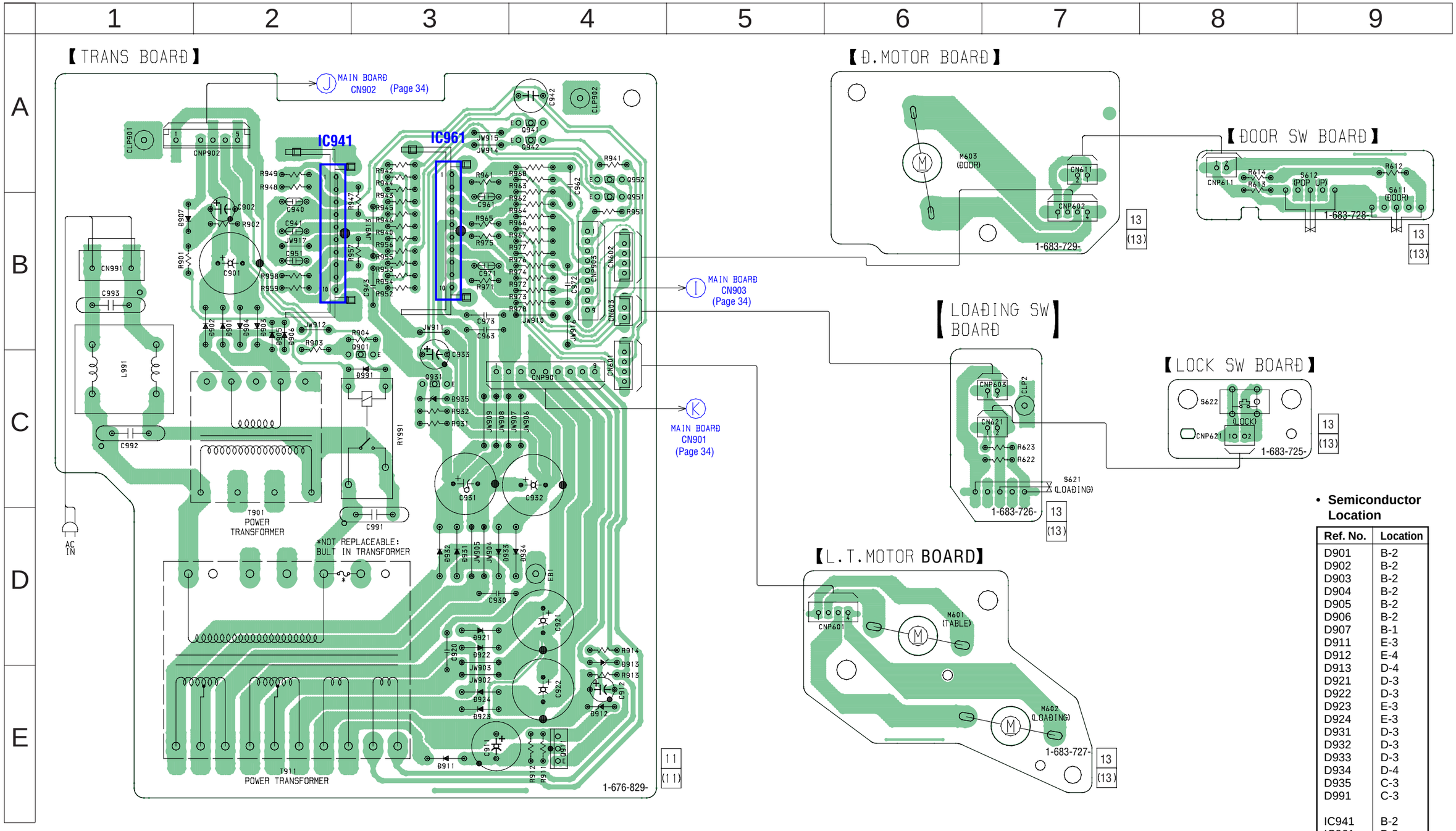


6-12. SCHEMATIC DIAGRAM — JOG SECTION —

• See page 44 for IC Block Diagrams.



6-13. PRINTED WIRING BOARD — POWER SECTION — • See page 29 for Circuit Boards Location. :Uses unleaded solder.

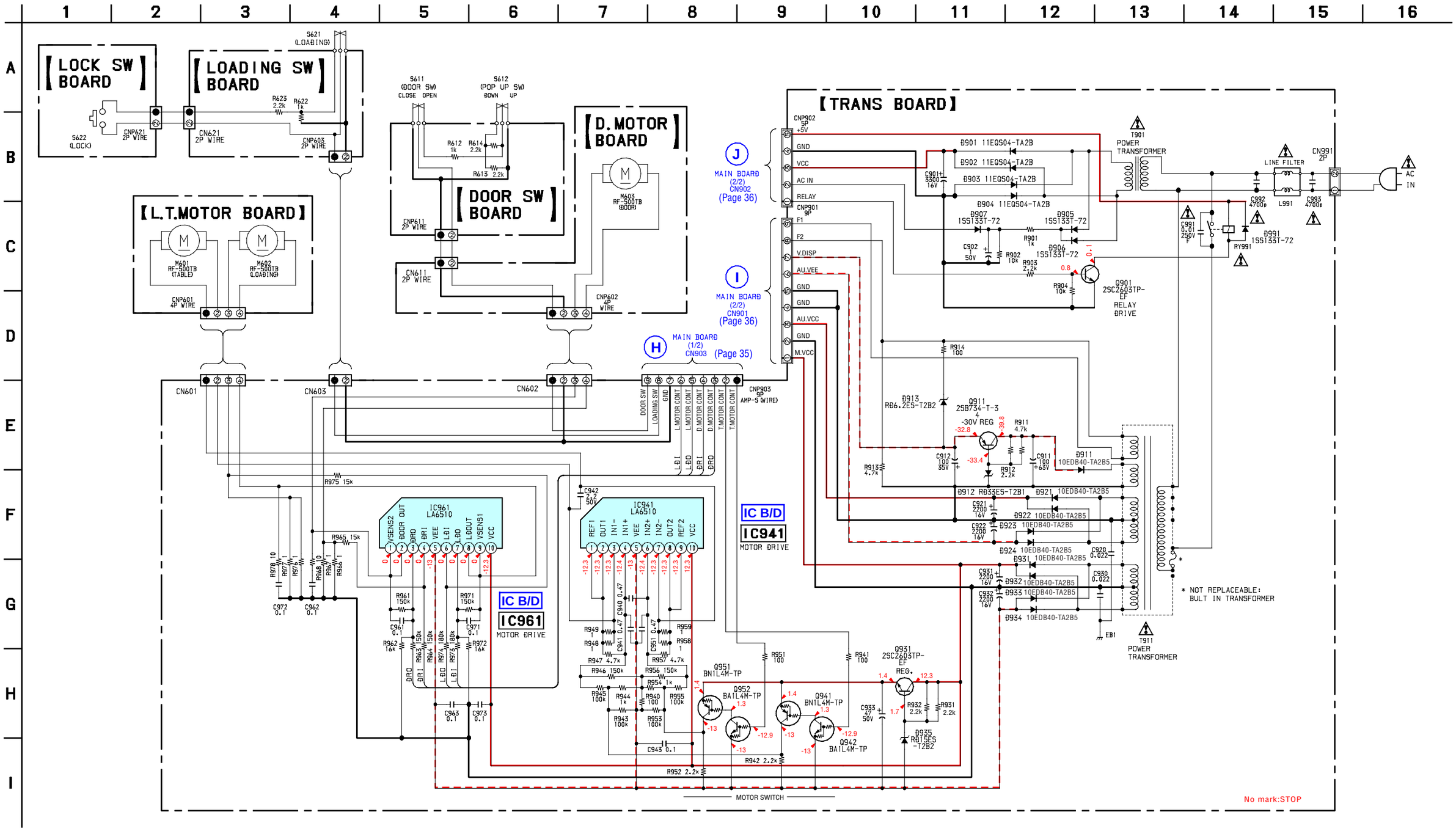


- **Semiconductor Location**

Ref. No.	Location
D901	B-2
D902	B-2
D903	B-2
D904	B-2
D905	B-2
D906	B-2
D907	B-1
D911	E-3
D912	E-4
D913	D-4
D921	D-3
D922	D-3
D923	E-3
D924	E-3
D931	D-3
D932	D-3
D933	D-3
D934	D-4
D935	C-3
D991	C-3
IC941	B-2
IC961	B-3
Q901	C-3
Q911	E-4
Q931	C-3
Q941	A-4
Q942	A-4
Q951	B-4
Q952	A-4

6-14. SCHEMATIC DIAGRAM — POWER SECTION —

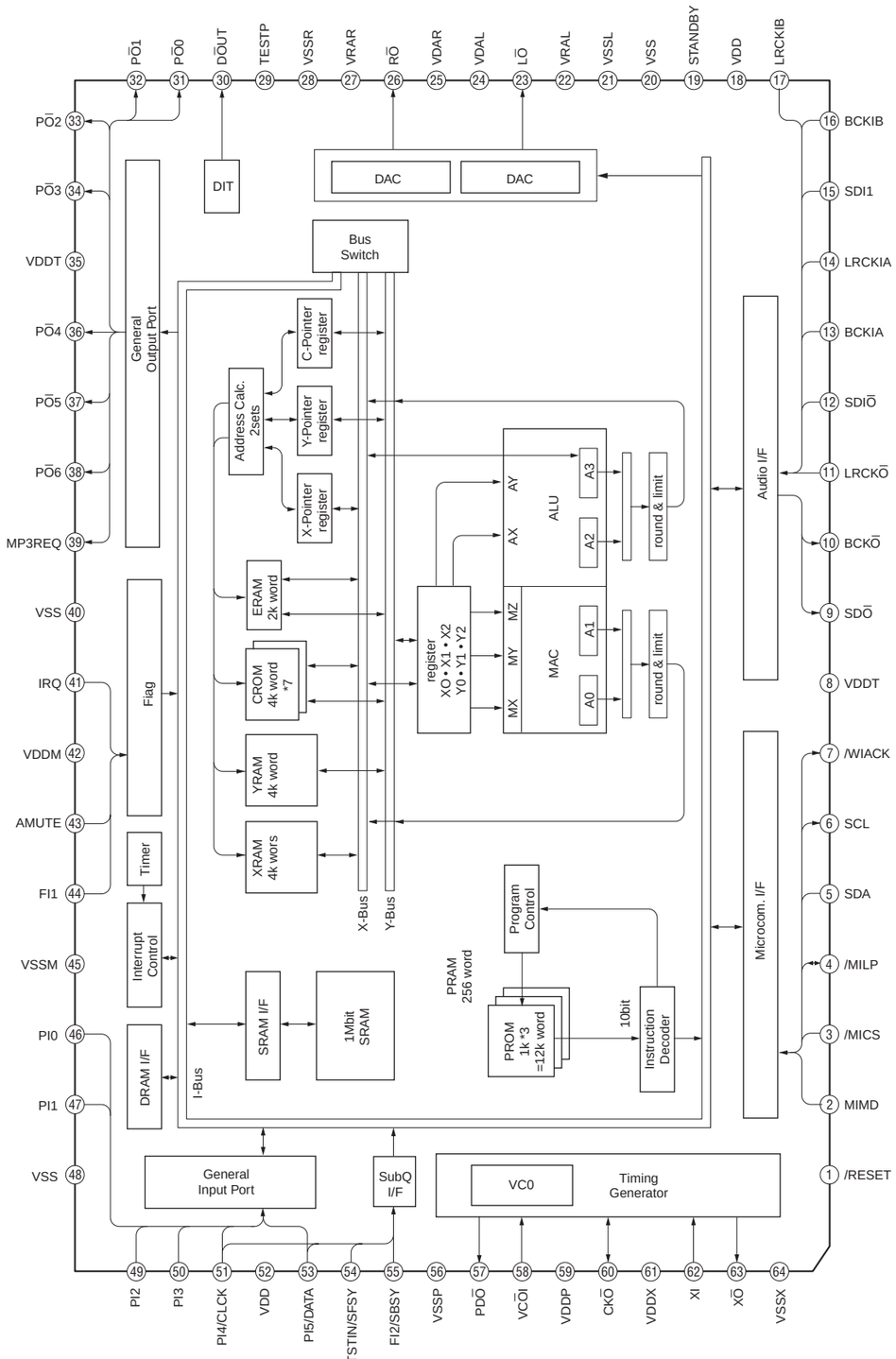
• See page 45 for IC Block Diagrams.



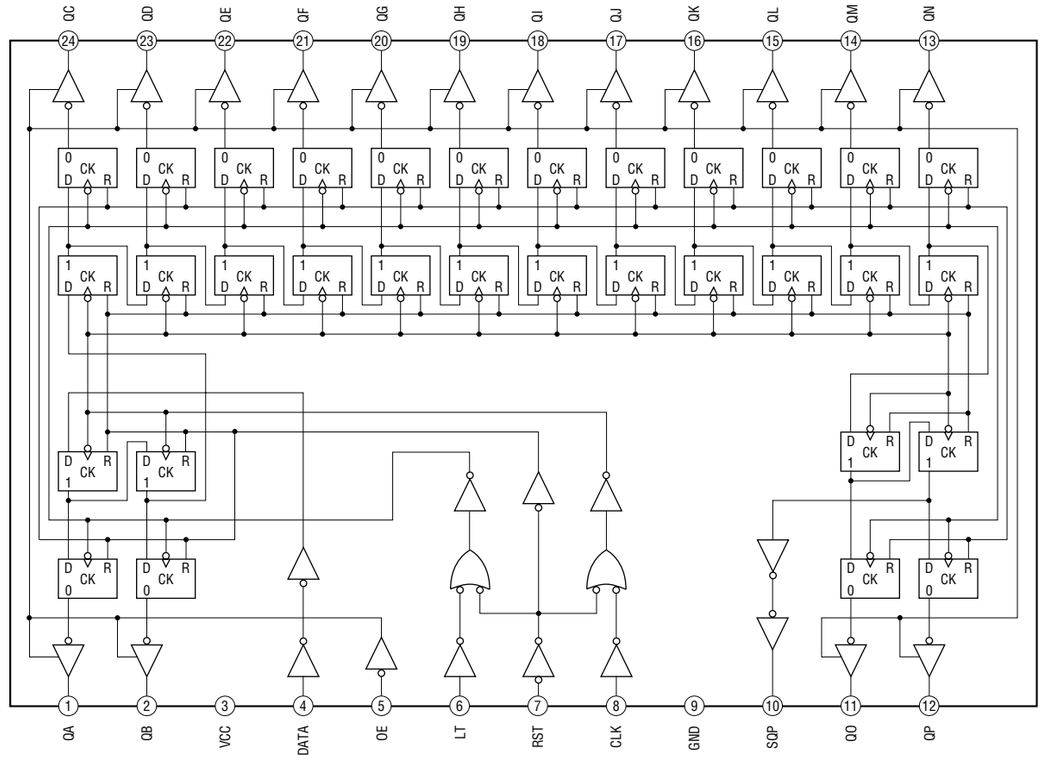
CDP-M400CS

- **IC Block Diagrams**

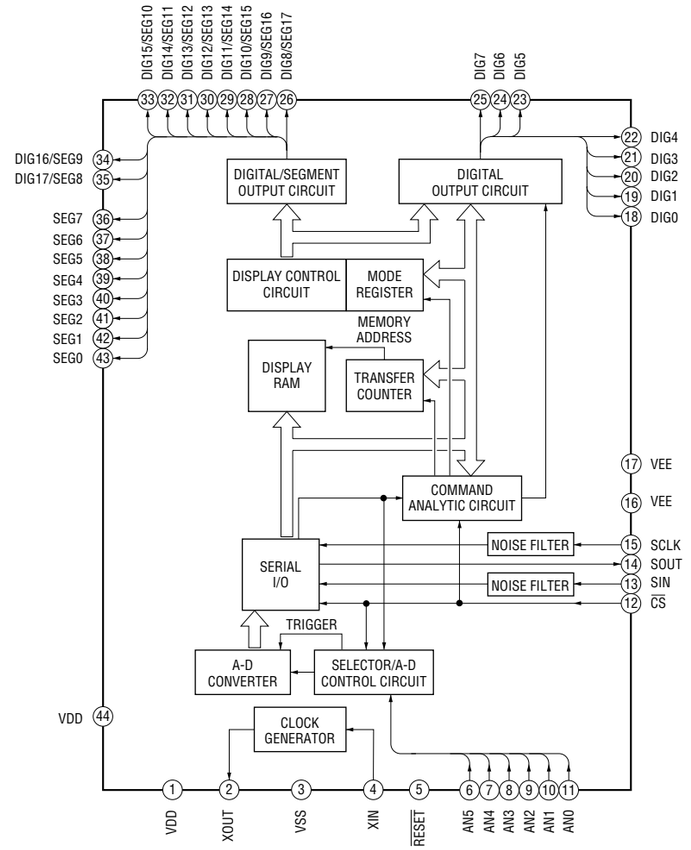
– BD Board –
IC104 TC94A20F-CX4



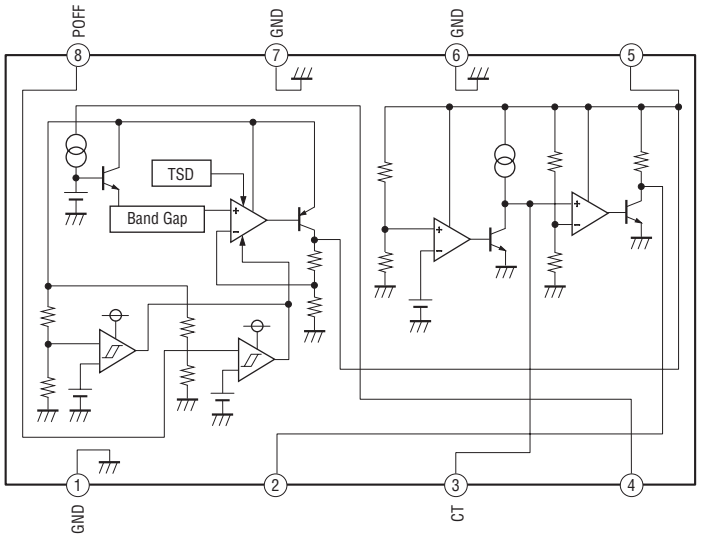
– DISP Board –
IC702 M66310FP



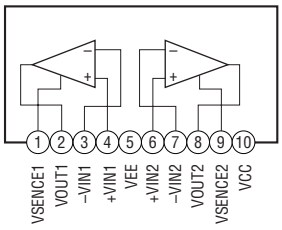
– JOG Board –
IC704 M35500BGP/AFP



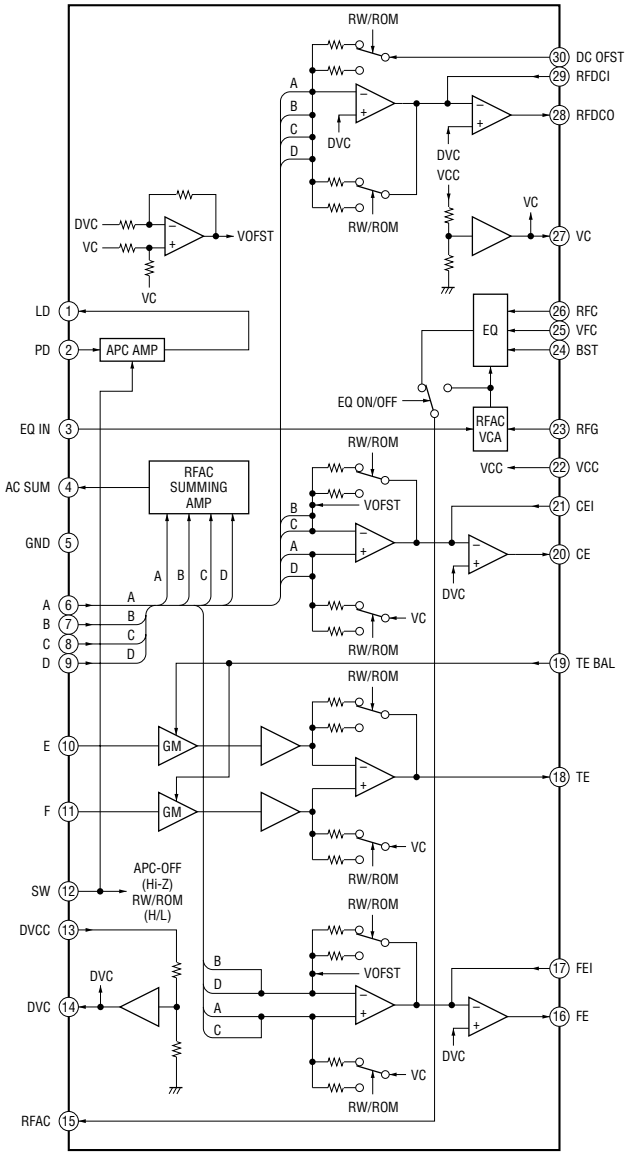
– MAIN Board –
IC931 BA3993F



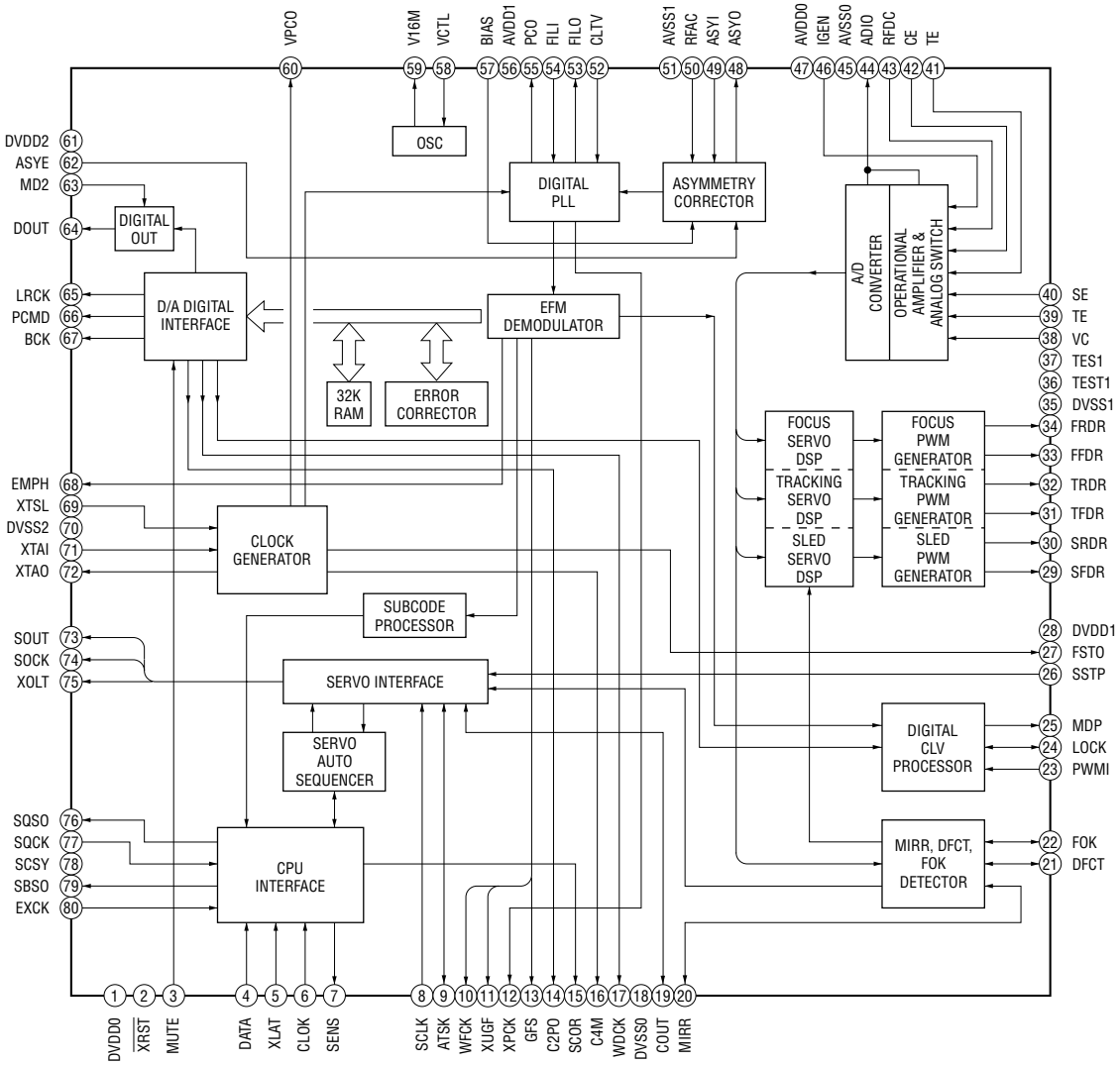
– TRANS Board –
IC941, IC961 LA6510



– BD Board –
IC103 CXA2581N-T4



IC101 CXD3068Q



• IC Pin Function Description

BD BOARD IC104 TC94A20F-CX4 (D/A CONVERTER, MP3 DECODER)

Pin No.	Pin Name	I/O	Description
1	/RESET	I	Reset input terminal “L”: reset
2	MIMD	I	Microcomputer interface mode selection input “H”: I2C, “L”: TSB (fixed at “H”)
3	/MICS	I	Microcomputer interface chip select signal input (fixed at “L”)
4	/MILP	I	Microcomputer interface latch pulse input (fixed at “L”)
5	SDA	I/O	Serial data input/output
6	SCL	I	Serial clock input
7	/MIACK	O	Microcomputer interface acknowledge signal output (open)
8	VDDT	—	Power supply (3.3V) for digital circuit
9	SDO	O	Data output (open)
10	BCKO	O	Bit output (open)
11	LRCKO	O	LR clock output (open)
12	SDI0	I	Data input 0
13	BCKIA	I	Bit clock input A
14	LRCKIA	I	LR clock input A
15	SDI1	I	Data input 1 (fixed at “L”)
16	BCKIB	I	Bit clock input B (fixed at “L”)
17	LRCKIB	I	LR clock input B (fixed at “L”)
18	VDD	—	Power supply (2.5V) for digital circuit
19	STANDBY	I	Standby mode control signal input “H”: STB, “L”: normal (fixed at “L”)
20	VSS	—	Ground for digital circuit
21	VSSL	—	Ground for DAC Lch
22	VRAL	—	Reference voltage terminal for DAC Lch
23	LO	O	DAC Lch signal output
24	VDAL	—	Power supply (2.5V) for DAC Lch
25	VDAR	—	Power supply (2.5V) for DAC Rch
26	RO	O	DAC Rch signal output
27	VRAR	—	Reference voltage terminal for DAC Rch
28	VSSR	—	Ground for DAC Rch
29	TESTP	I	Terminal for test “H”: test mode, “L”: normal (fixed at “L”)
30	DOUT	O	SPDIF signal output (open)
31 to 34	PO0 to PO3	O	General purpose output (open)
35	VDDT	—	Power supply (3.3V) for digital circuit
36	PO4	O	General purpose output (LMUTE signal output)
37	PO5	O	General purpose output (RMUTE signal output)
38	PO6	O	General purpose output (open)
39	MP3REQ	O	Interrupt request signal output to the system control (IC501)
40	VSS	—	Ground for digital circuit
41	IRQ	I	External interrupt signal input (open)
42	VDDM	—	Power supply (2.5V) for the internal 1Mbit SRAM
43	AMUTE	I	Flag signal input 0 (AMUTE signal input)
44	FI1	I	Flag signal input 1 (fixed at “L”)
45	VSSM	—	Ground for the internal 1Mbit SRAM
46, 47	PI0, PI1	I	General purpose input (fixed at “L”)
48	VSS	—	Ground for digital circuit
49, 50	PI2, PI3	I	General purpose input (fixed at “L”)
51	PI4/CLCK	I	General purpose input/SUBQ interface clock input or output (fixed at “L”)
52	VDD	—	Power supply (2.5V) for digital circuit

Pin No.	Pin Name	I/O	Description
53	PI5/DATA	I	General purpose input/SUBQ interface data input (fixed at “L”)
54	TSTIN/SFSY	I	Terminal for test/SUBQ interface frame sync input (fixed at “L”)
55	FI2/SBSY	I	Flag signal input 2/SUBQ interface block sync input (fixed at “L”)
56	VSSP	—	Ground for VCO circuit
57	PDO	O	PLL phase error detection signal output
58	VCOI	I	VCO control voltage input
59	VDDP	—	Power supply (2.5V) for VCO circuit
60	CKO	O	External clock output
61	VDDX	—	Power supply (2.5V) for oscillation circuit
62	XI	I	Resonator terminal (input)
63	XO	O	Resonator terminal (output)
64	VSSX	—	Ground for oscillation circuit

MAIN BOARD IC501 μPD703030BYGF-M13-3BA (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Description
1	FLDATA	O	Data signal output to the fluorescent indicator drivers amd LED driver
2	FLCLK	O	Clock signal output to the fluorescent indicator drivers and LED driver
3	LEDLAT	O	Latch signal output to the LED driver
4	DATA	O	Data output to the DSP
5	CLK	O	Clock signal output to the DSP
6	SENS	I	SENS signal input from the DSP
7	MP3RST	O	Reset signal output to the IC104
8	FLRST	O	Reset signal output to the the fluorescent indicator driver amd LED driver
9	EVDD	—	Power supply (I/O port)
10	EVSS	—	Ground (I/O port)
11	PWM1	O	PWM1 signal output
12	PWM2	O	PWM2 signal output
13	RMIN	I	Data input from the remote control receiver
14	BUSOUT	O	CONTROL A1 signal output
15	SUBQ	I	CD SUBQ signal input from the DSP
16	BUSIN	I	CONTROL A1 signal input
17	SQCK	O	CD SUBQ clock signal output to the DSP
18	AMUTE	O	Muting signal output to the IC104
19	PWM3	O	PWM3 signal output
20	XLT	O	Latch signal output to the DSP
21	IC/VPP	—	Connected to ground
22	TBLR	O	Table motor control signal output (clockewise)
23	TBLL	O	Table motor control signal output (counterclockewise)
24	LDOUT	O	Loading motor control signal output (out)
25	LODIN	O	Loading motor control signal output (in)
26	DOORIN	O	Door motor control signal output (close)
27	DOOROUT	O	Door motor control signal output (open)
28	ICSW	O	Power supply to the peripheral ICs
29	SMUTE	O	2nd audio input muting signal output
30	SBLED	O	Sandby LED control signal output
31	LED	O	Inside illumination LED control signal output
32	DSENSOUT	O	Disc sensor readout result signal output
33	H-HOUT	O	Or signal of TSENS1/TSENS2 output
34	RESET	I	System reset input
35	XT1	I	Sub clock input
36	XT2	O	Sub clock output
37	REGC	–	Capacitor connection terminal for regulator output stabilizing
38	X2	O	Main system clock output
39	X1	I	Main system clock input
40	VSS	—	Ground
41	VDD	—	Power supply
42	CLKOUT	O	Clock output (open)
43	FLT2	O	Fluorescent indicator driver (IC704) latch signal output
44	FLT1	O	Fluorescent indicator driver (IC701) latch signal output
45	KBCO	O	Keyboard clock output
46	XRST	O	Peripheral ICs reset signal output
47	CE	O	SRAM chip enable signal output

Pin No.	Pin Name	I/O	Description
48	WE	O	SRAM write enable signal output
49	A4	O	SRAM address signal output
50	D0	I/O	SRAM data bus
51 to 57	D1 to D7	I/O	SRAM data bus
58	BVDD	—	Power supply (I/O port)
59	BVSS	—	Ground (I/O port)
60, 61	A13, A14	O	SRAM address signal output
62	A0	O	SRAM address signal output
63 to 70	A5 to A12	O	SRAM address signal output
71 to 73	A1 to A3	O	SRAM address signal output
74	AVDD	—	Power supply (A/D converter)
75	AVSS	—	Ground (A/D converter)
76	AVREF	—	Reference voltage for A/D converter
77	ADJ	I	selector (ADJ/AFADJ)
78	DOORSW	I	Door switch signal input (A/D)
79	LDSW	I	Loading switch signal input (A/D)
80	KEY0	I	Key data signal input (A/D)
81	DJOG2	I	Jog signal input
82	TJOG2	I	AMS jog signal input
83	TJOG1	I	AMS jog signal input
84	DJOG1	I	Jog signal input
85	KBDI	I	Keyboard data input
86	DSENS	I	Disc sensor signal input
87	TSENS1	I	Table sensor signal input
88	TSENS3	I	Table sensor signal input
89	KBDO	O	Keyboard data output
90	POWER	I	POWER key signal input
91	TSENS2	I	Table sensor signal input
92	TSENS4	I	Table sensor signal input
93	KBCI	I	Keyboard clock input
94	ACIN	I	AC power detection signal input
95	SCOR	I	Sync signal input from the DSP
96	MP3REQ	I	MP3 request signal input from the IC104
97	SDA/SI0	I/O	MP3 IIC data input or output
98	RFSW/SO0	O	Mode selection signal output to the RF amplifier (IC103)
99	SCL/SCK0	O	MP3 clock output to the IC104
100	FLDATA_I	I	Data input from the fluorescent indicator driver

SECTION 7
EXPLODED VIEWS

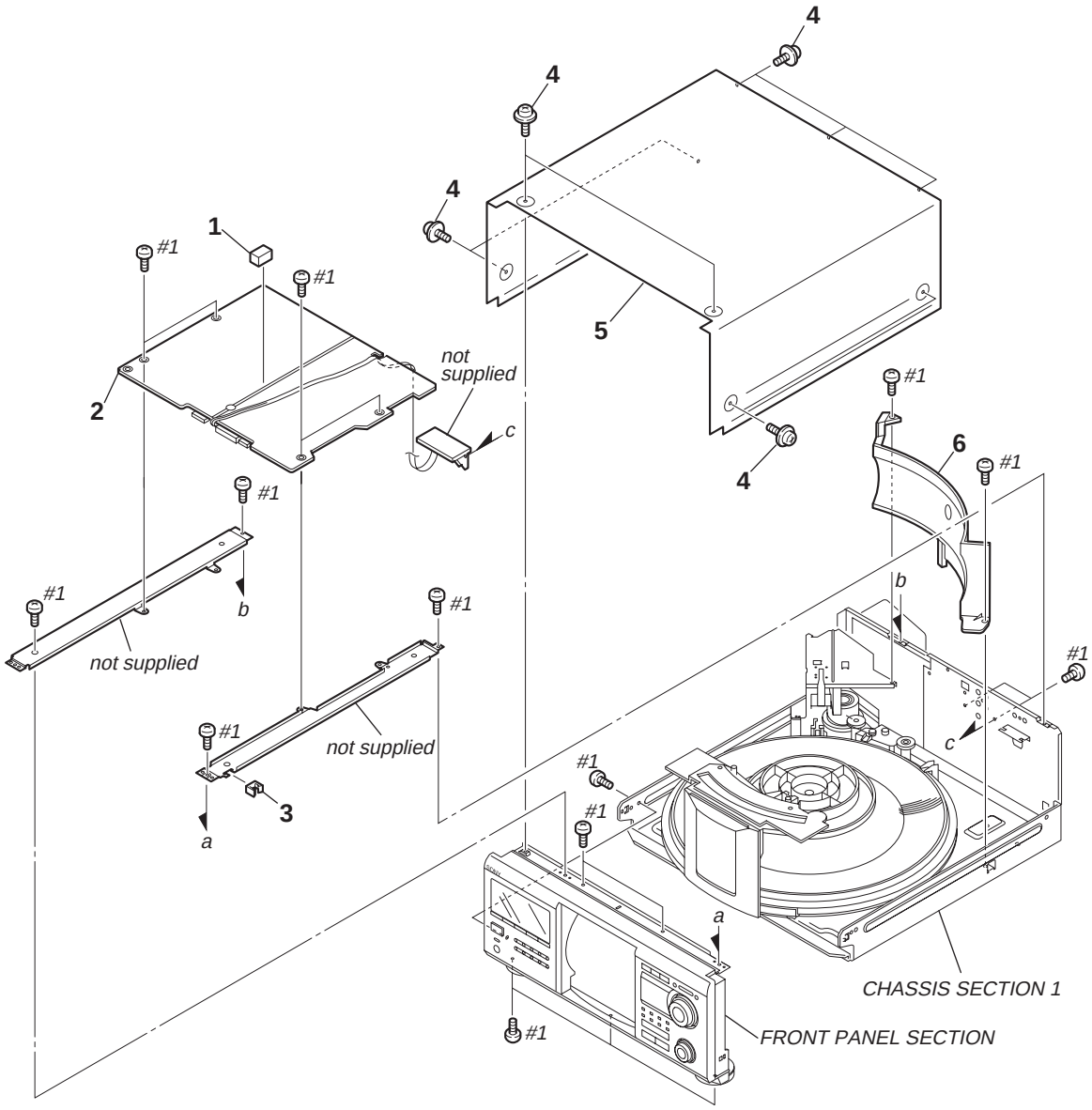
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  CND : Canadian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

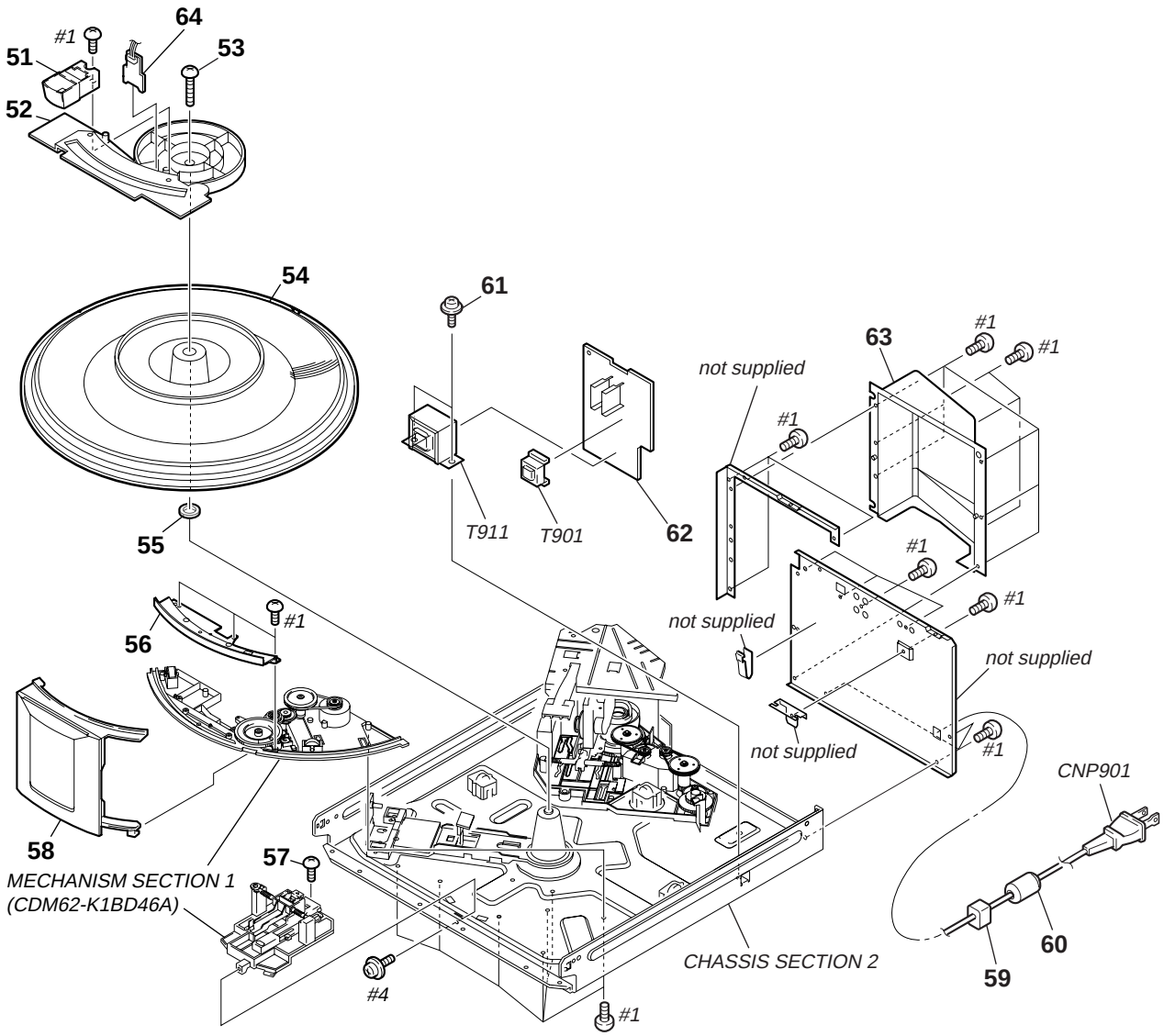
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. CASE SECTION



Ref. No.	Part No.	Description	Remark
1	4-985-553-11	CUSHION	
2	A-1082-286-A	MAIN BOARD, COMPLETE	
3	3-383-699-01	CLAMP (EDGE)	
4	3-363-099-11	SCREW (CASE 3 TP2)	
5	4-226-855-52	CASE	
6	4-226-841-02	COVER (PT)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

7-2. CHASSIS SECTION 1

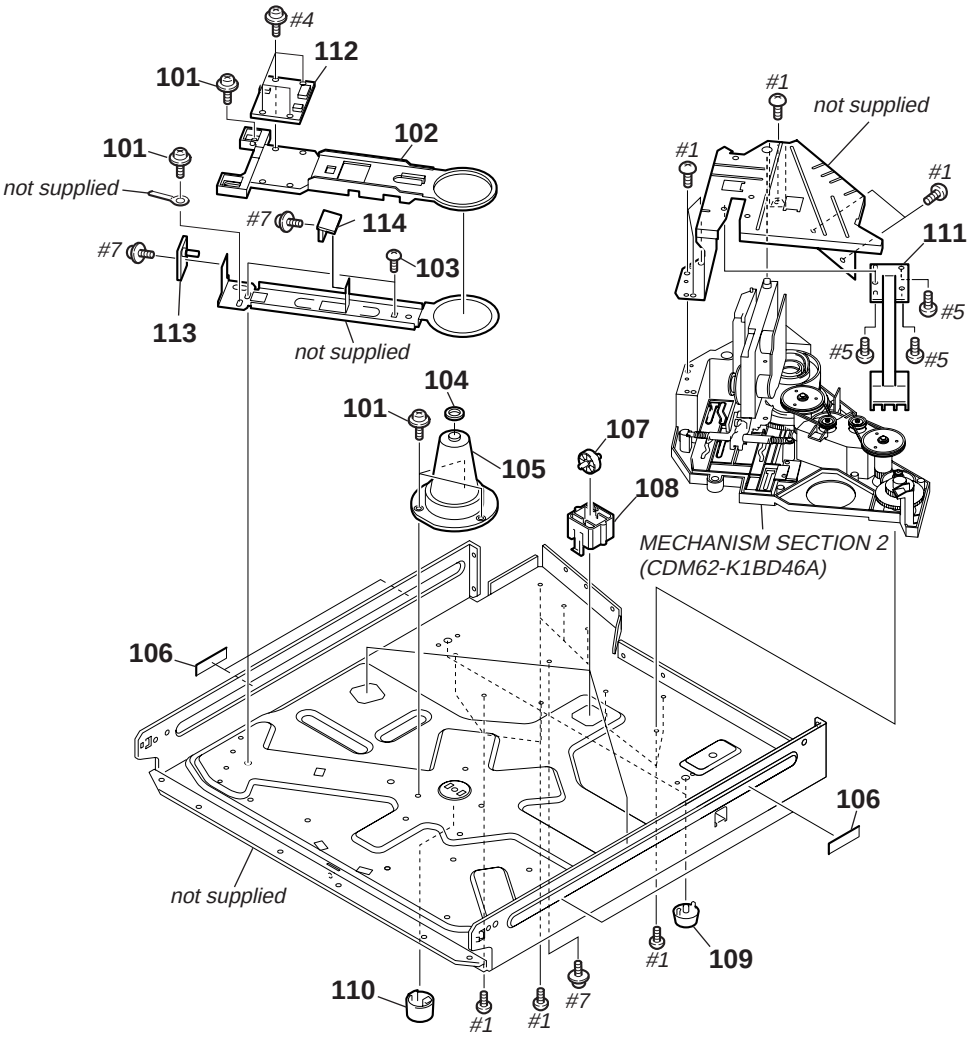


Ref. No.	Part No.	Description	Remark
51	4-215-968-01	WINDOW (INTERNAL ILLUMINATION)	
52	4-226-833-06	GUIDE (DOOR)	
53	3-703-136-31	SCREW (M3X14)	
54	X-4952-500-2	TABLE (400) ASSY	
55	3-701-447-21	WASHER, 10	
56	4-226-834-01	COVER (TABLE)	
57	3-356-601-13	SCREW, STEP	
58	X-2024-238-1	DOOR ASSY	
* 59	3-703-244-00	BUSHING (2104), CORD	
60	1-469-854-11	CORE, FERRITE	

Ref. No.	Part No.	Description	Remark
61	3-703-249-02	SCREW, S TIGHT, +PTTWH 3X6	
62	A-4727-717-A	TRANS BOARD, COMPLETE	
63	4-226-876-21	COVER (CDM)	
64	1-683-730-13	LED BOARD	
⚠CNP901	1-783-820-21	CORD, POWER	
⚠T901	1-437-709-11	TRANSFORMER, POWER	
⚠T911	1-435-327-11	TRANSFORMER, POWER	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#4	7-685-903-11	SCREW +PTPWH 3X6 (TYPE2)	

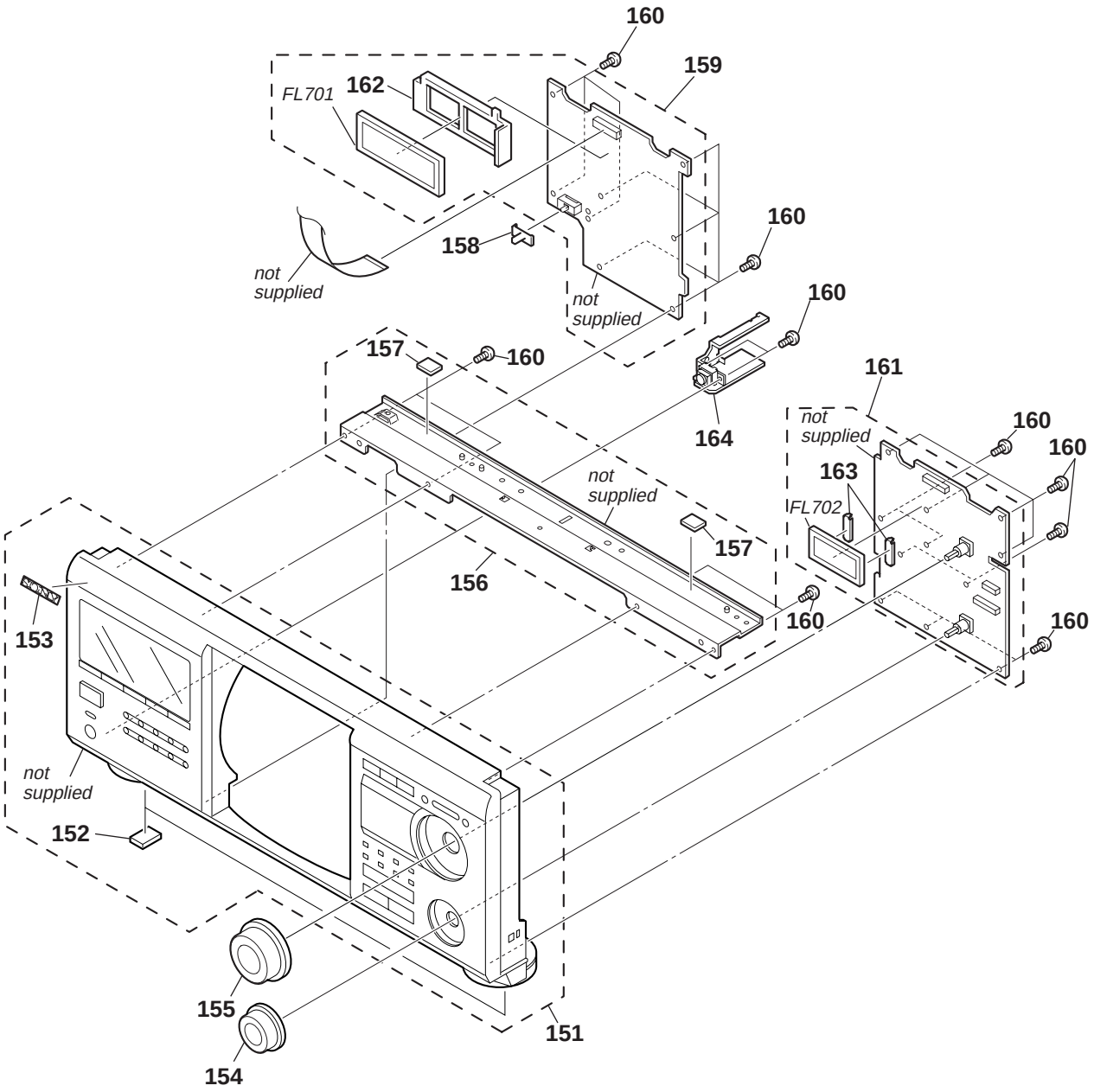
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-3. CHASSIS SECTION 2



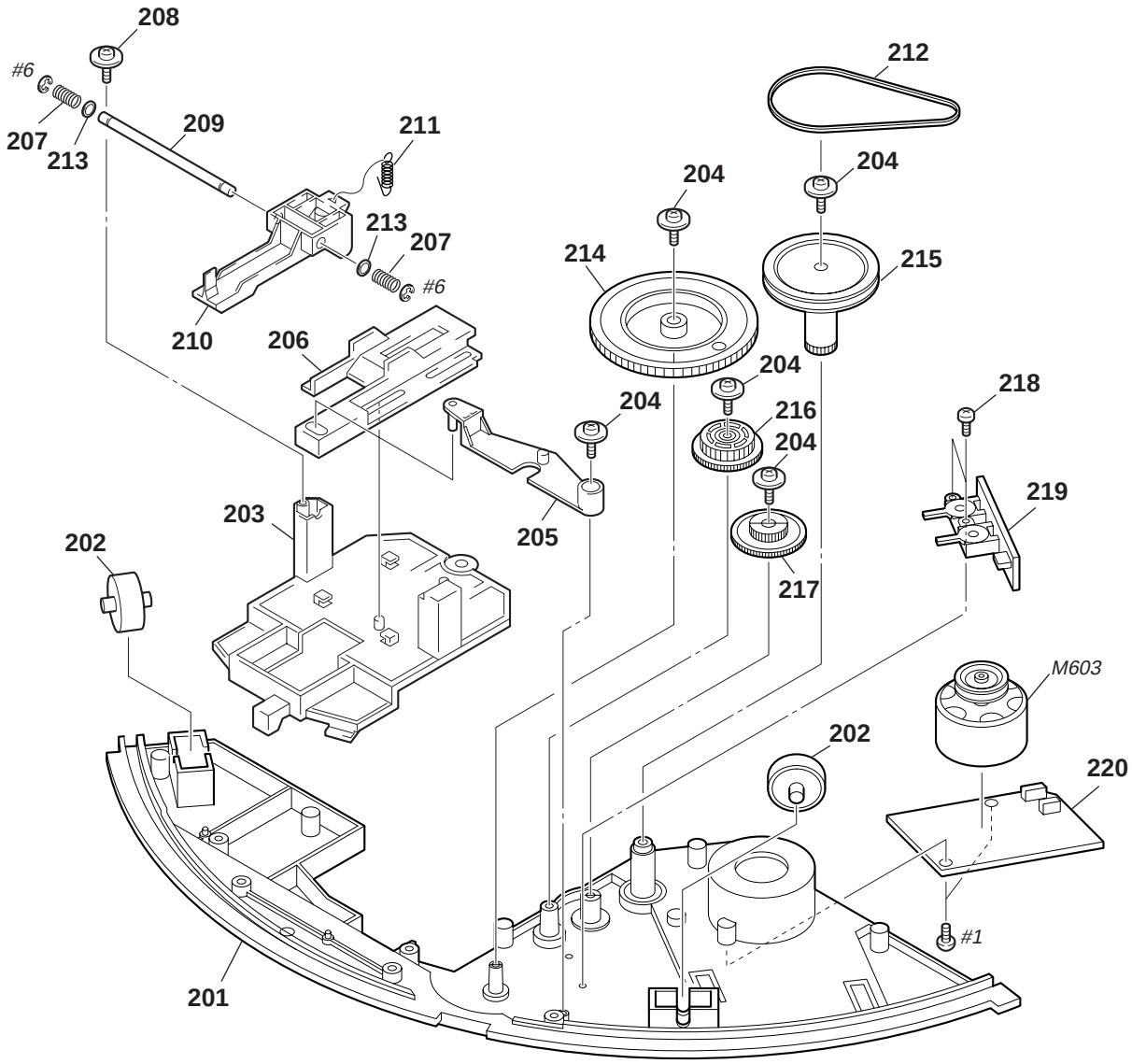
Ref. No.	Part No.	Description	Remark
101	3-703-249-02	SCREW, S TIGHT, +PTTWH 3X6	
102	4-225-873-01	HOLDER (TABLE SENSOR 400)	
103	4-216-096-02	SCREW (T1), STEP	
104	3-701-447-21	WASHER, 10	
105	4-216-089-02	SHAFT (CENTER)	
* 106	3-378-400-01	CUSHION, SARANET	
107	4-216-093-01	ROLLER	
108	4-216-092-03	HOLDER (ROLLER)	
109	4-965-822-01	FOOT	
110	X-2022-049-1	FOOT ASSY	
111	4-216-088-02	GUIDE (DISC)	
112	1-676-828-11	T.SENS BOARD	
113	1-683-724-13	D.SENS (OUT) BOARD	
114	1-683-723-13	D.SENS (IN) BOARD	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#4	7-685-903-11	SCREW +PTPWH 3X6 (TYPE2)	
#5	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
#7	7-682-948-01	SCREW +PSW 3X8	

7-4. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
151	X-2024-235-1	PANEL ASSY, FRONT	
152	4-977-358-01	CUSHION	
153	4-996-698-61	EMBLEM, SONY	
154	4-226-847-21	KNOB (AMS)	
155	4-226-846-21	KNOB (DISC)	
156	X-4952-642-2	BRACKET (CASE) ASSY	
157	4-985-553-21	CUSHION	
158	3-917-216-71	KNOB (TIMER)	
159	A-4727-719-A	DISP BOARD, COMPLETE	
160	3-087-053-01	+BVTP2.6 (3CR)	
161	A-4727-721-A	JOG BOARD, COMPLETE	
162	4-982-811-21	HOLDER (FL)	
* 163	4-929-709-31	GUIDE (FL TUBE)	
164	1-683-722-13	KEYBOARD BOARD	
FL701	1-518-802-11	INDICATOR TUBE, FLUORESCENT	
FL702	1-518-803-11	INDICATOR TUBE, FLUORESCENT	

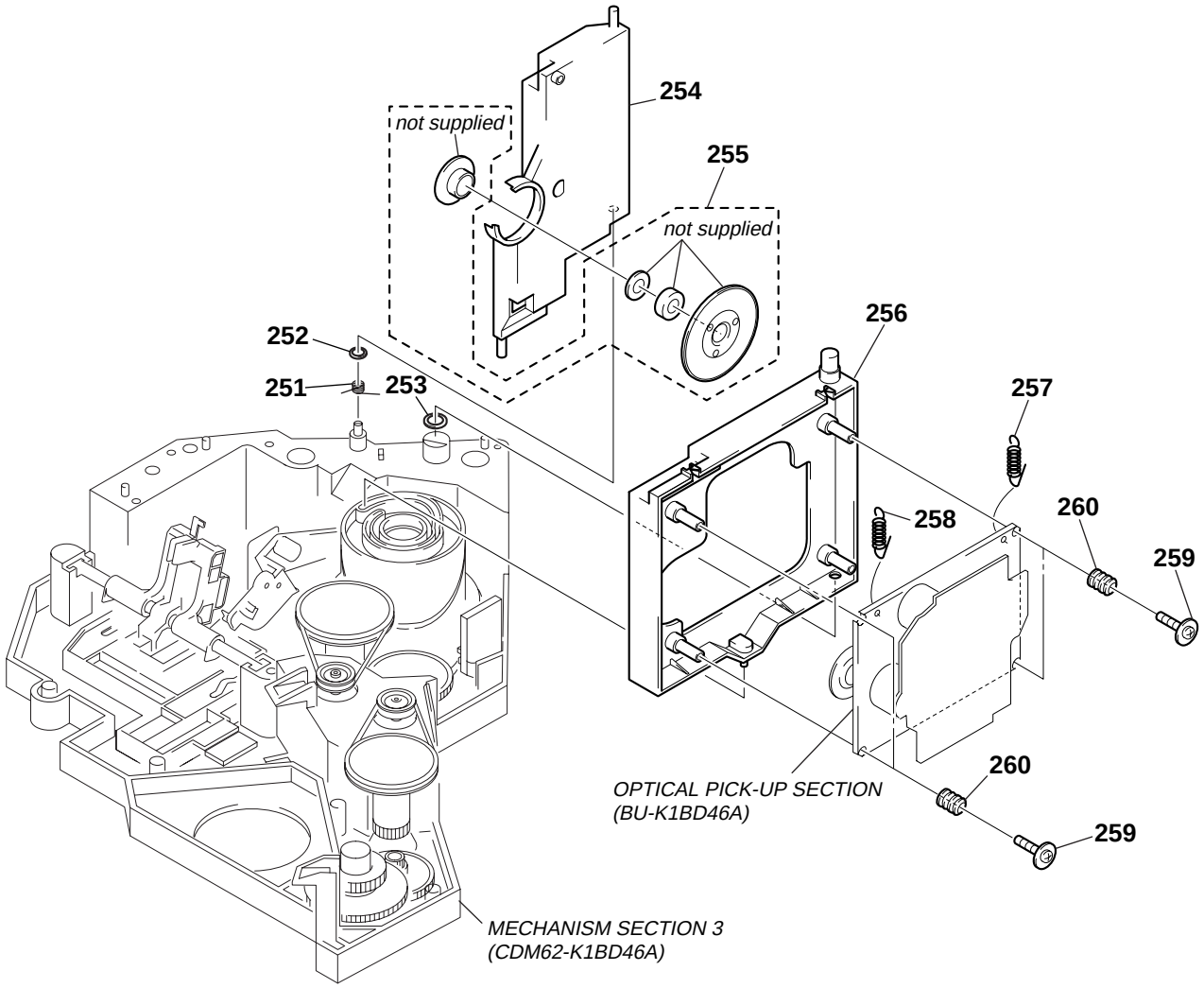
7-5. MECHANISM SECTION 1 (CDM62-K1BD46A)



Ref. No.	Part No.	Description	Remark
201	4-226-827-02	BASE (DOOR DRIVING)	
202	4-216-093-01	ROLLER	
203	4-216-100-02	HOLDER (POP-UP)	
204	4-933-134-11	SCREW (+PTPWH M2.6X8)	
205	4-226-832-01	LEVER (PU JOINT)	
206	4-216-099-02	SLIDER (POP-UP)	
207	4-216-103-01	SPRING (POP-UP), COMPRESSION	
208	4-998-716-01	SCREW, BU FITTING	
209	4-216-102-01	SHAFT (POP-UP FULCRUM)	
210	4-228-352-01	LEVER (POP-UP 400)	
211	4-216-104-01	SPRING (POP-UP), TENSION	
212	4-219-326-01	BELT (DIA. 42X1.2)	

Ref. No.	Part No.	Description	Remark
213	3-701-441-21	WASHER	
214	4-226-828-02	GEAR (CAM)	
215	4-226-829-01	GEAR (PULLEY)	
216	4-226-831-01	GEAR (B)	
217	4-226-830-01	GEAR (A)	
218	3-087-053-01	+BVTP2.6 (3CR)	
219	1-683-728-13	DOOR SW BOARD	
220	1-683-729-13	D.MOTOR BOARD	
M603	1-541-632-12	MOTOR, DC (DOOR)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#6	7-624-106-04	STOP RING 3.0, TYPE -E	

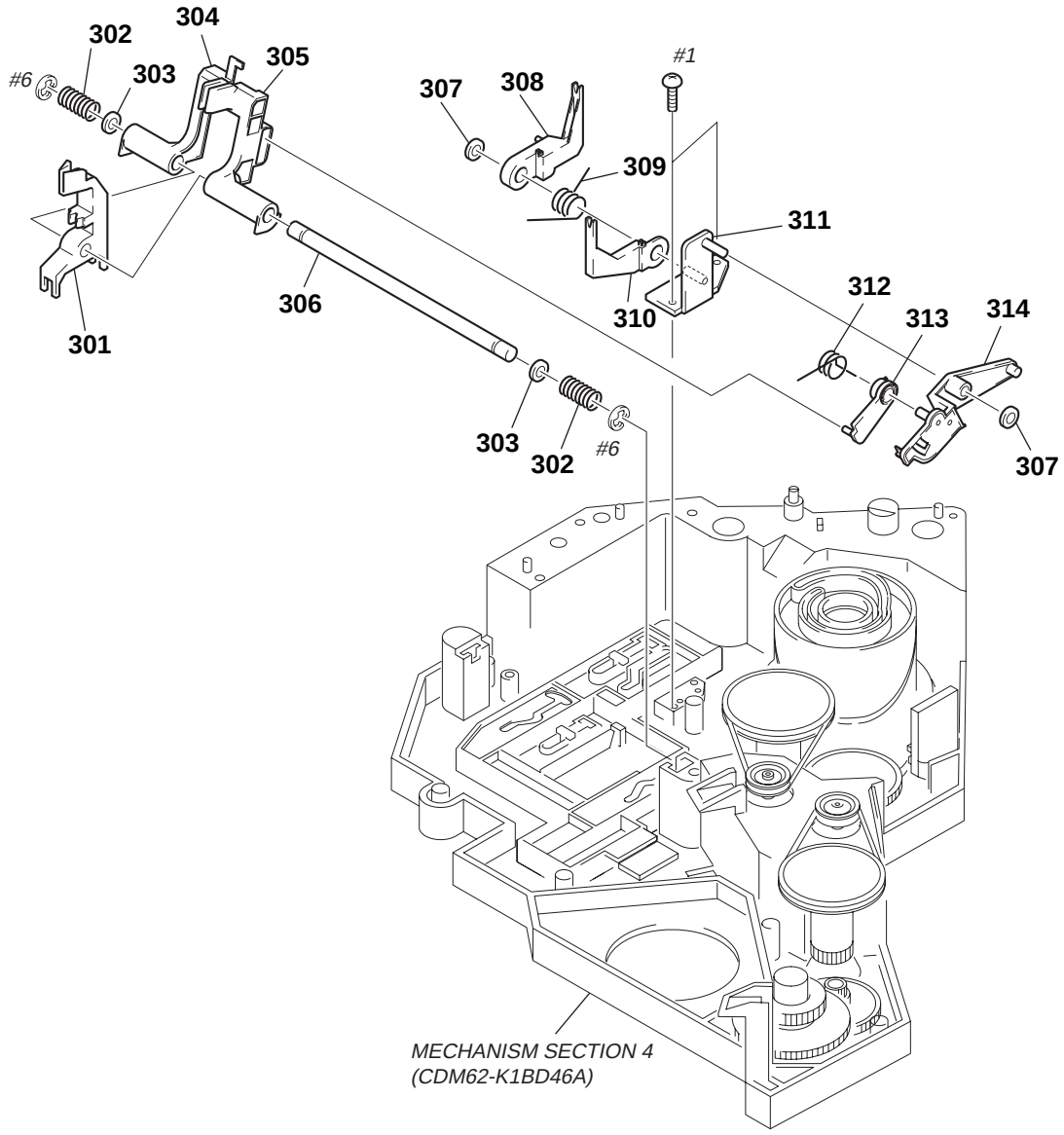
7-6. MECHANISM SECTION 2 (CDM62-K1BD46A)



Ref. No.	Part No.	Description	Remark
251	4-216-081-01	SPRING (MG), TORSION	
252	3-701-441-21	WASHER	
253	3-701-446-21	WASHER, 8	
254	4-216-082-11	HOLDER (MAGNET), TORSION	
255	A-4672-768-A	MAGNET ASSY	

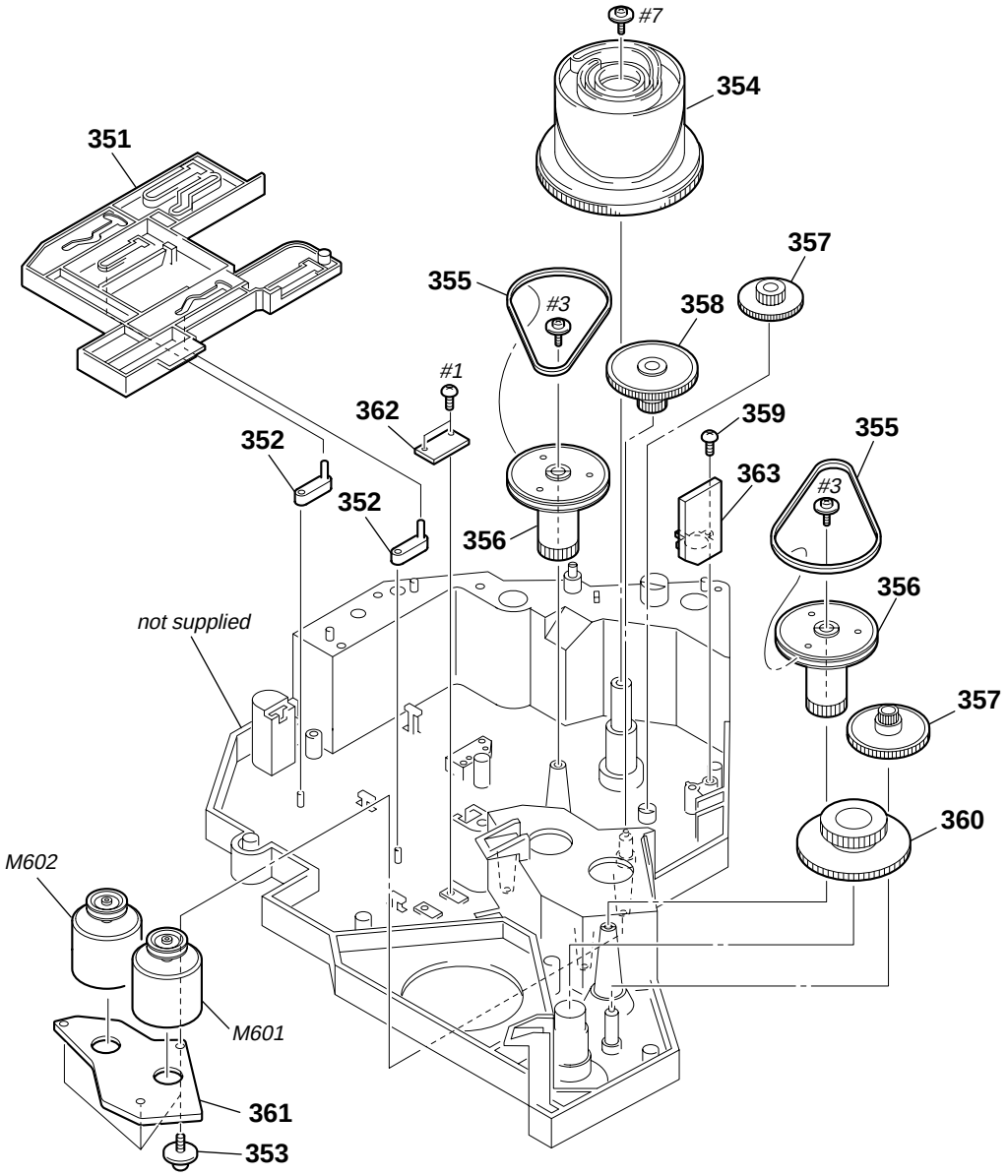
Ref. No.	Part No.	Description	Remark
256	X-4950-901-5	HOLDER ASSY, BU	
257	4-216-086-01	SPRING (F-2), TENSION	
258	4-216-085-01	SPRING (F-1), TENSION	
259	4-957-577-01	SCREW PTP WH (2.6X8) (DIA. 10)	
260	4-992-054-11	RUBBER, VIBRATION PROOF	

7-7. MECHANISM SECTION 3 (CDM62-K1BD46A)



Ref. No.	Part No.	Description	Remark
301	X-4952-499-1	LEVER (LOCK 400) ASSY	
302	4-216-067-01	SPRING (CLAMP), COMPRESSION	
303	3-701-441-21	WASHER	
304	X-4952-501-1	HOLDER (DISC L400) ASSY	
305	X-4952-502-1	HOLDER (DISC R400) ASSY	
306	4-225-868-01	SHAFT (CLAMP 400)	
307	3-325-697-21	WASHER	
308	4-216-076-11	HOLDER (R)	
309	4-216-077-01	SPRING (HOLDER FR), TORSION	
310	4-225-871-03	HOLDER (F400)	
311	X-4950-900-1	BRACKET (LEVER) ASSY	
312	4-216-080-01	SPRING (LIMITTER), TORSION	
313	4-216-079-02	LIMITTER (LEVER)	
314	4-216-078-01	LEVER (LOADING)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#6	7-624-106-04	STOP RING 3.0, TYPE -E	

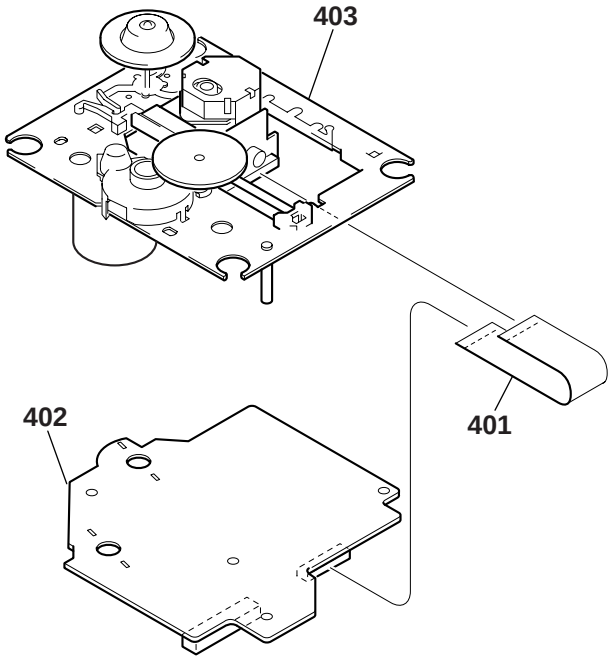
7-8. MECHANISM SECTION 4 (CDM62-K1BD46A)



Ref. No.	Part No.	Description	Remark
351	4-225-865-01	SLIDER (400)	
352	X-4952-503-1	LEVER (FULCRUM 400) ASSY	
353	4-933-134-11	SCREW (+PTPWH M2.6X8)	
354	A-4672-676-B	CAM ASSY	
355	4-225-876-01	BELT (400)	
356	4-225-870-01	PULLEY (400)	
357	4-216-057-01	GEAR (CENTER 2)	
358	4-216-058-01	GEAR (CENTER)	
359	3-087-053-01	+BVTP2.6 (3CR)	

Ref. No.	Part No.	Description	Remark
360	4-225-869-01	GEAR (TABLE 400)	
361	1-683-727-13	L.T.MOTOR BOARD	
362	1-683-725-13	LOCK SW BOARD	
363	1-683-726-13	LOADING SW BOARD	
M601	A-4672-895-A	MOTOR (400) ASSY (TABLE)	
M602	A-4672-895-A	MOTOR (400) ASSY (LOADING)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-648-79	SCREW, TAPPING +BV 3X12, TYPE 2, IT-3	
#7	7-682-948-01	SCREW +PSW 3X8	

7-9. OPTICAL PICK-UP SECTION (BU-K1BD46A)



Ref. No.	Part No.	Description	Remark
401	1-782-817-11	WIRE (FLAT TYPE) (16 CORE)	
402	A-4727-735-A	BD BOARD, COMPLETE	
⚠403	A-3328-818-A	OPTICAL PICK-UP KSM-213BFN/C2N1	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

BD

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  CND : Canadian model
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH
- Accessories are given in the last of this parts list.

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
	A-4727-735-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C103	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C104	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C107	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C108	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C109	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C110	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C111	1-126-208-21	ELECT CHIP	47uF	20%	4V
C113	1-128-995-21	ELECT CHIP	100uF	20%	10V
C114	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C115	1-128-995-21	ELECT CHIP	100uF	20%	10V
C116	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C117	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C118	1-115-156-11	CERAMIC CHIP	1uF		10V
C119	1-115-156-11	CERAMIC CHIP	1uF		10V
C120	1-126-208-21	ELECT CHIP	47uF	20%	4V
C121	1-117-920-11	TANTAL. CHIP	10uF	20%	6.3V
C131	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C132	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C133	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C150	1-128-995-21	ELECT CHIP	100uF	20%	10V
C151	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C152	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C158	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C201	1-126-246-11	ELECT CHIP	220uF	20%	4V
C202	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C203	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C204	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C206	1-126-208-21	ELECT CHIP	47uF	20%	4V
C207	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C208	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C209	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C211	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C212	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C213	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C215	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C216	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C222	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C223	1-126-208-21	ELECT CHIP	47uF	20%	4V
C224	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C226	1-126-208-21	ELECT CHIP	47uF	20%	4V
C227	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C229	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C230	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C231	1-128-995-21	ELECT CHIP	100uF	20%	10V
C232	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C250	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C251	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C252	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C253	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C254	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C255	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C256	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C257	1-165-112-11	CERAMIC CHIP	0.33uF		16V
C258	1-162-975-11	CERAMIC CHIP	24PF	5%	50V
C259	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C260	1-126-246-11	ELECT CHIP	220uF	20%	4V
C261	1-126-208-21	ELECT CHIP	47uF	20%	4V
C263	1-117-920-11	TANTAL. CHIP	10uF	20%	6.3V
C264	1-126-208-21	ELECT CHIP	47uF	20%	4V
C265	1-126-208-21	ELECT CHIP	47uF	20%	4V
C266	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C267	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C268	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C269	1-117-920-11	TANTAL. CHIP	10uF	20%	6.3V
C270	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C271	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C276	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C292	1-115-156-11	CERAMIC CHIP	1uF		10V
C297	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
CN101	1-784-879-21	CONNECTOR, FFC (LIF (NON-ZIF)) 31P			
CN102	1-777-937-11	CONNECTOR, FFC/FPC 16P			
		< FERRITE BEAD/RESISTOR >			
FB101	1-500-283-11	INDUCTOR, FERRITE BEAD			
FB102	1-500-283-11	INDUCTOR, FERRITE BEAD			
FB103	1-500-283-11	INDUCTOR, FERRITE BEAD			
FB104	1-500-283-11	INDUCTOR, FERRITE BEAD			
FB105	1-216-864-11	SHORT CHIP	0		

BD | D.MOTOR | D.SENS (IN) | D.SENS (OUT) | DISP

Ref. No.	Part No.	Description			Remark
FB111	1-216-864-11	SHORT CHIP	0		
FB251	1-414-594-11	INDUCTOR, FERRITE BEAD			
FB291	1-216-864-11	SHORT CHIP	0		
FB292	1-216-864-11	SHORT CHIP	0		
		< IC >			
IC101	8-752-408-73	IC CXD3068Q			
IC103	8-752-089-74	IC CXA2581N-T4			
IC104	6-701-810-01	IC TC94A20F-CX4			
IC105	6-700-226-01	IC TC74LVX04FT (EL)			
IC121	6-701-808-01	IC BA33C25FP-E2			
IC150	8-759-677-90	IC BA5947FP-E2			
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR	MSB710-R		
		< RESISTOR >			
R101	1-216-864-11	SHORT CHIP	0		
R102	1-216-833-11	METAL CHIP	10K	5%	1/10W
R103	1-216-845-11	METAL CHIP	100K	5%	1/10W
R104	1-216-833-11	METAL CHIP	10K	5%	1/10W
R105	1-216-821-11	METAL CHIP	1K	5%	1/10W
R111	1-216-846-11	METAL CHIP	120K	5%	1/10W
R113	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R114	1-218-745-11	METAL CHIP	160K	0.5%	1/10W
R117	1-216-845-11	METAL CHIP	100K	5%	1/10W
R118	1-216-833-11	METAL CHIP	10K	5%	1/10W
R120	1-216-846-11	METAL CHIP	120K	5%	1/10W
R122	1-216-845-11	METAL CHIP	100K	5%	1/10W
R123	1-216-797-11	METAL CHIP	10	5%	1/10W
R124	1-216-797-11	METAL CHIP	10	5%	1/10W
R125	1-216-834-11	METAL CHIP	12K	5%	1/10W
R126	1-216-834-11	METAL CHIP	12K	5%	1/10W
R131	1-216-845-11	METAL CHIP	100K	5%	1/10W
R132	1-216-853-11	METAL CHIP	470K	5%	1/10W
R133	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R151	1-216-845-11	METAL CHIP	100K	5%	1/10W
R152	1-216-849-11	METAL CHIP	220K	5%	1/10W
R153	1-216-864-11	SHORT CHIP	0		
R155	1-216-864-11	SHORT CHIP	0		
R156	1-216-864-11	SHORT CHIP	0		
R201	1-216-839-11	METAL CHIP	33K	5%	1/10W
R202	1-216-833-11	METAL CHIP	10K	5%	1/10W
R203	1-216-845-11	METAL CHIP	100K	5%	1/10W
R204	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R205	1-216-821-11	METAL CHIP	1K	5%	1/10W
R206	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R207	1-216-857-11	METAL CHIP	1M	5%	1/10W
R213	1-216-864-11	SHORT CHIP	0		
R214	1-216-864-11	SHORT CHIP	0		
R215	1-216-864-11	SHORT CHIP	0		
R216	1-216-857-11	METAL CHIP	1M	5%	1/10W
R218	1-216-821-11	METAL CHIP	1K	5%	1/10W
R219	1-216-821-11	METAL CHIP	1K	5%	1/10W
R220	1-216-821-11	METAL CHIP	1K	5%	1/10W
R230	1-216-813-11	METAL CHIP	220	5%	1/10W
R231	1-216-817-11	METAL CHIP	470	5%	1/10W

Ref. No.	Part No.	Description			Remark
R232	1-216-817-11	METAL CHIP	470	5%	1/10W
R233	1-216-817-11	METAL CHIP	470	5%	1/10W
R249	1-216-817-11	METAL CHIP	470	5%	1/10W
R250	1-216-813-11	METAL CHIP	220	5%	1/10W
R251	1-216-813-11	METAL CHIP	220	5%	1/10W
R252	1-216-857-11	METAL CHIP	1M	5%	1/10W
R253	1-216-821-11	METAL CHIP	1K	5%	1/10W
R254	1-216-845-11	METAL CHIP	100K	5%	1/10W
R265	1-216-813-11	METAL CHIP	220	5%	1/10W
R266	1-216-813-11	METAL CHIP	220	5%	1/10W
R271	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)			
		< VIBRATOR >			
X201	1-795-154-21	VIBRETOR, CRYSTAL (16.9MHz)			
**********					
	1-683-729-13	D.MOTOR BOARD			
		**********			
		< MOTOR >			
M603	1-541-632-12	MOTOR, DC (DOOR)			
**********					
	1-683-723-13	D.SENS (IN) BOARD			
		**********			
*	4-985-300-02	HOLDER (P-T)			
		< TRANSISTOR >			
Q81	8-729-921-53	PHOTO TRANSISTOR PT483F1			
**********					
	1-683-724-13	D.SENS (OUT) BOARD			
		**********			
*	4-976-473-01	HOLDER (LED-S)			
		< DIODE >			
D81	8-719-055-84	DIODE GL528VS1			
**********					
	A-4727-719-A	DISP BOARD, COMPLETE			
		**********			
	4-982-811-21	HOLDER (FL)			
		< CAPACITOR >			
C702	1-164-159-11	CERAMIC	0.1uF		50V
C703	1-164-159-11	CERAMIC	0.1uF		50V
C781	1-104-658-91	ELECT	100uF	20%	10V
C782	1-104-658-91	ELECT	100uF	20%	10V
C784	1-162-282-31	CERAMIC	100PF	10%	50V
C785	1-162-282-31	CERAMIC	100PF	10%	50V
C786	1-162-282-31	CERAMIC	100PF	10%	50V
C787	1-162-306-11	CERAMIC	0.01uF	20%	16V
C788	1-162-215-31	CERAMIC	47PF	5%	50V
C789	1-164-159-11	CERAMIC	0.1uF		50V

DISP **DOOR SW** **IR-IN**

Ref. No.	Part No.	Description			Remark
C791	1-162-286-31	CERAMIC	220PF	10%	50V
C792	1-162-294-31	CERAMIC	0.001uF	10%	50V
		< CONNECTOR >			
CNP502	1-784-778-11	CONNECTOR, FFC 17P			
		< DIODE >			
D701	8-719-046-39	DIODE SEL5821A-TP15 (TOP ARTIST 1)			
D702	8-719-046-39	DIODE SEL5821A-TP15 (TOP ARTIST 2)			
D703	8-719-046-39	DIODE SEL5821A-TP15 (TOP ARTIST 3)			
D704	8-719-046-39	DIODE SEL5821A-TP15 (TOP ARTIST 4)			
D705	8-719-046-39	DIODE SEL5821A-TP15 (ARTIST MODE)			
D706	8-719-046-39	DIODE SEL5821A-TP15 (TOP ARTIST 5)			
D707	8-719-046-39	DIODE SEL5821A-TP15 (TOP ARTIST 6)			
D708	8-719-046-39	DIODE SEL5821A-TP15 (TOP ARTIST 7)			
D709	8-719-046-39	DIODE SEL5821A-TP15 (TOP ARTIST 8)			
D710	8-719-046-44	DIODE SEL5221S (STANDBY)			
		< FLUORESCENT INDICATOR >			
FL701	1-518-802-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC701	6-702-066-01	IC PT6302-R-001			
IC702	8-759-183-47	IC M66310FP			
IC703	8-759-827-70	IC NJL64H400A-1 (R)			
		< TRANSISTOR >			
Q701	8-729-116-02	TRANSISTOR	BA1A4M-TP		
		< RESISTOR >			
R742	1-247-831-91	CARBON	1K	5%	1/4W
R743	1-249-421-11	CARBON	2.2K	5%	1/4W
R744	1-249-421-11	CARBON	2.2K	5%	1/4W
R745	1-247-847-91	CARBON	4.7K	5%	1/4W
R752	1-247-831-91	CARBON	1K	5%	1/4W
R753	1-249-421-11	CARBON	2.2K	5%	1/4W
R754	1-249-421-11	CARBON	2.2K	5%	1/4W
R755	1-247-847-91	CARBON	4.7K	5%	1/4W
R762	1-247-831-91	CARBON	1K	5%	1/4W
R763	1-249-421-11	CARBON	2.2K	5%	1/4W
R764	1-249-421-11	CARBON	2.2K	5%	1/4W
R765	1-247-847-91	CARBON	4.7K	5%	1/4W
R766	1-249-429-11	CARBON	10K	5%	1/4W
R767	1-247-863-91	CARBON	22K	5%	1/4W
R781	1-247-807-31	CARBON	100	5%	1/4W
R782	1-247-807-31	CARBON	100	5%	1/4W
R783	1-247-807-31	CARBON	100	5%	1/4W
R784	1-247-807-31	CARBON	100	5%	1/4W
R785	1-247-807-31	CARBON	100	5%	1/4W
R786	1-247-843-11	CARBON	3.3K	5%	1/4W
R787	1-247-879-91	CARBON	100K	5%	1/4W
R788	1-247-807-31	CARBON	100	5%	1/4W
R789	1-247-807-31	CARBON	100	5%	1/4W
R790	1-249-409-11	CARBON	220	5%	1/4W
R791	1-249-409-11	CARBON	220	5%	1/4W
R792	1-249-409-11	CARBON	220	5%	1/4W
R793	1-249-413-11	CARBON	470	5%	1/4W

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S741	1-771-349-21	SWITCH, KEYBOARD (TOP ARTIST 1)			
S742	1-771-349-21	SWITCH, KEYBOARD (TOP ARTIST 2)			
S743	1-771-349-21	SWITCH, KEYBOARD (TOP ARTIST 3)			
S744	1-771-349-21	SWITCH, KEYBOARD (TOP ARTIST 4)			
S745	1-771-349-21	SWITCH, KEYBOARD (ARTIST MODE)			
S751	1-771-349-21	SWITCH, KEYBOARD (TOP ARTIST 5)			
S752	1-771-349-21	SWITCH, KEYBOARD (TOP ARTIST 6)			
S753	1-771-349-21	SWITCH, KEYBOARD (TOP ARTIST 7)			
S754	1-771-349-21	SWITCH, KEYBOARD (TOP ARTIST 8)			
S755	1-771-349-21	SWITCH, KEYBOARD (TIME)			
S761	1-771-349-21	SWITCH, KEYBOARD (DISPLAY)			
S762	1-771-349-21	SWITCH, KEYBOARD (REPEAT)			
S763	1-771-349-21	SWITCH, KEYBOARD (PROGRAM)			
S764	1-771-349-21	SWITCH, KEYBOARD (SHUFFLE)			
S765	1-771-349-21	SWITCH, KEYBOARD (CONTINUE)			
S766	1-771-349-21	SWITCH, KEYBOARD (I/⏻)			
S768	1-570-157-51	SWITCH, SLIDE (TIMER)			
**********					
	1-683-728-13	DOOR SW BOARD			
		**********			
		< RESISTOR >			
R612	1-247-831-91	CARBON	1K	5%	1/4W
R613	1-249-421-11	CARBON	2.2K	5%	1/4W
R614	1-249-421-11	CARBON	2.2K	5%	1/4W
		< SWITCH >			
S611	1-786-154-11	SWITCH, ROTARY (DOOR)			
S612	1-786-154-11	SWITCH, ROTARY (POP UP)			
**********					
		IR-IN BOARD			
		**********			
		< CAPACITOR >			
C1001	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1002	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1007	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1009	1-216-864-11	SHORT CHIP	0		
		< CONNECTOR >			
CN1001	1-784-921-11	PIN, CONNECTOR 4P			
		< JACK >			
J1001	1-566-891-21	JACK (IR REMOTE IR IN)			
		< TRANSISTOR >			
Q1001	8-729-900-52	TRANSISTOR	DTC114YK		
		< RESISTOR >			
R1001	1-216-864-11	SHORT CHIP	0		
R1004	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1005	1-216-864-11	SHORT CHIP	0		
R1006	1-216-864-11	SHORT CHIP	0		
**********					

JOG **KEYBOARD** **L.T.MOTOR**

Ref. No.	Part No.	Description			Remark
	A-4727-721-A	JOG BOARD, COMPLETE			
		**********			
*	4-929-709-31	GUIDE (FL TUBE)			
		< CAPACITOR >			
C701	1-161-494-00	CERAMIC	0.022uF		25V
C711	1-161-494-00	CERAMIC	0.022uF		25V
C721	1-161-494-00	CERAMIC	0.022uF		25V
C731	1-161-494-00	CERAMIC	0.022uF		25V
C741	1-161-494-00	CERAMIC	0.022uF		25V
C751	1-161-494-00	CERAMIC	0.022uF		25V
C773	1-164-159-11	CERAMIC	0.1uF		50V
C774	1-124-584-00	ELECT	100uF	20%	10V
C775	1-162-207-31	CERAMIC	22PF	5%	50V
C776	1-164-159-11	CERAMIC	0.1uF		50V
C777	1-162-282-31	CERAMIC	100PF	10%	50V
C778	1-164-159-11	CERAMIC	0.1uF		50V
		< DIODE >			
D711	8-719-046-41	DIODE SEL5521C-TP15 (▷)			
D712	8-719-046-39	DIODE SEL5821A-TP15 (▮▮)			
D715	8-719-046-41	DIODE SEL5521C-TP15 (HISTORY)			
		< FLUORESCENT INDICATOR >			
FL702	1-518-803-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC704	8-759-547-59	IC M35500BGP/AFP			
		< RESISTOR >			
R701	1-249-429-11	CARBON	10K	5%	1/4W
R702	1-247-831-91	CARBON	1K	5%	1/4W
R703	1-249-421-11	CARBON	2.2K	5%	1/4W
R704	1-249-421-11	CARBON	2.2K	5%	1/4W
R705	1-247-847-91	CARBON	4.7K	5%	1/4W
R706	1-249-429-11	CARBON	10K	5%	1/4W
R707	1-247-863-91	CARBON	22K	5%	1/4W
R711	1-249-429-11	CARBON	10K	5%	1/4W
R712	1-247-831-91	CARBON	1K	5%	1/4W
R713	1-249-421-11	CARBON	2.2K	5%	1/4W
R714	1-249-421-11	CARBON	2.2K	5%	1/4W
R721	1-249-429-11	CARBON	10K	5%	1/4W
R722	1-247-831-91	CARBON	1K	5%	1/4W
R723	1-249-421-11	CARBON	2.2K	5%	1/4W
R724	1-249-421-11	CARBON	2.2K	5%	1/4W
R725	1-247-847-91	CARBON	4.7K	5%	1/4W
R726	1-249-429-11	CARBON	10K	5%	1/4W
R727	1-247-863-91	CARBON	22K	5%	1/4W
R731	1-249-429-11	CARBON	10K	5%	1/4W
R741	1-249-429-11	CARBON	10K	5%	1/4W
R751	1-249-429-11	CARBON	10K	5%	1/4W
R771	1-247-807-31	CARBON	100	5%	1/4W
R772	1-249-407-11	CARBON	150	5%	1/4W
R773	1-249-407-11	CARBON	150	5%	1/4W
R774	1-247-807-31	CARBON	100	5%	1/4W
R775	1-247-807-31	CARBON	100	5%	1/4W
R794	1-247-807-31	CARBON	100	5%	1/4W
		< ROTARY ENCODER >			
RE701	1-475-543-11	ENCODER, ROTARY (DISC/ALBUM/CHARACTER)			
RE702	1-475-543-11	ENCODER, ROTARY (AMS)			
		< SWITCH >			
S701	1-771-349-21	SWITCH, KEYBOARD (OPEN/CLOSE)			
S702	1-771-349-21	SWITCH, KEYBOARD (DISC EJECT)			
S703	1-771-349-21	SWITCH, KEYBOARD (HISTORY)			
S704	1-771-349-21	SWITCH, KEYBOARD (MENU/NO)			
S705	1-771-349-21	SWITCH, KEYBOARD (+100)			
S706	1-771-349-21	SWITCH, KEYBOARD (YES)			
S711	1-771-349-21	SWITCH, KEYBOARD (CHECK)			
S712	1-771-349-21	SWITCH, KEYBOARD (CLEAR)			
S713	1-771-349-21	SWITCH, KEYBOARD (NAME SEARCH)			
S714	1-692-537-21	SWITCH, TACTILE (WITH LIGHT) (ALBUM SELECT)			
S721	1-692-537-11	SWITCH, TACTILE (WITH LIGHT) (MEGA CONTROL)			
S722	1-771-349-21	SWITCH, KEYBOARD (NO DELAY)			
S723	1-771-349-21	SWITCH, KEYBOARD (X-FADE)			
S724	1-771-349-21	SWITCH, KEYBOARD (FADER)			
S725	1-771-349-21	SWITCH, KEYBOARD (▮▮)			
S726	1-771-349-21	SWITCH, KEYBOARD (■)			
S767	1-771-349-21	SWITCH, KEYBOARD (▷)			
**********					
	1-683-722-13	KEYBOARD BOARD			
		**********			
		< CAPACITOR >			
C821	1-164-159-11	CERAMIC	0.1uF		50V
C822	1-164-159-11	CERAMIC	0.1uF		50V
C823	1-126-925-91	ELECT	470uF	20%	10V
		< CONNECTOR >			
CNP503	1-785-332-11	PIN, CONNECTOR (LIGHT ANGLE) 6P			
		< JACK >			
J821	1-785-945-11	CONNECTOR, DIN (KEYBOARD)			
		< NOISE FILTER >			
L821	1-424-122-11	FILTER, NOISE			
L822	1-424-122-11	FILTER, NOISE			
L823	1-424-122-11	FILTER, NOISE			
L824	1-424-122-11	FILTER, NOISE			
**********					
	1-683-727-13	L.T.MOTOR BOARD			
		**********			
		< MOTOR >			
M601	A-4672-895-A	MOTOR (400) ASSY (TABLE)			
M602	A-4672-895-A	MOTOR (400) ASSY (LOADING)			
**********					

LED **LOADING SW** **LOCK SW** **MAIN**

Ref. No.	Part No.	Description			Remark
	1-683-730-13	LED BOARD			
		**********			
		< CAPACITOR >			
C801	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CNP504	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE) 2P			
		< DIODE >			
D801	8-719-069-45	DIODE SELU5E23C-TP15			
		< RESISTOR >			
R801	1-249-401-11	CARBON	47	5%	1/4W
		**********			
	1-683-726-13	LOADING SW BOARD			
		**********			
		< RESISTOR >			
R622	1-247-831-91	CARBON	1K	5%	1/4W
R623	1-249-421-11	CARBON	2.2K	5%	1/4W
		< SWITCH >			
S621	1-786-154-11	SWITCH, ROTARY (LOADING)			
		**********			
	1-683-725-13	LOCK SW BOARD			
		**********			
		< SWITCH >			
S622	1-771-604-11	SWITCH, DETECTION (LOCK)			
		**********			
	A-1082-286-A	MAIN BOARD, COMPLETE			
		**********			
*	3-309-144-21	HEAT SINK			
*	4-363-146-21	HEAT SINK, V.OUT			
	7-685-871-01	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C301	1-126-965-91	ELECT	22uF	20%	50V
C302	1-130-471-00	MYLAR	0.001uF	5%	50V
C303	1-137-367-11	MYLAR	0.0033uF	5%	50V
C304	1-126-965-91	ELECT	22uF	20%	50V
C305	1-126-965-91	ELECT	22uF	20%	50V
C307	1-126-960-11	ELECT	1uF	20%	50V
C310	1-164-159-11	CERAMIC	0.1uF		50V
C311	1-164-159-11	CERAMIC	0.1uF		50V
C321	1-126-963-11	ELECT	4.7uF	20%	50V
C327	1-124-282-00	ELECT	22uF	20%	25V
C328	1-162-290-31	CERAMIC	470PF	10%	50V
C329	1-126-963-11	ELECT	4.7uF	20%	50V
C401	1-126-965-91	ELECT	22uF	20%	50V
C402	1-130-471-00	MYLAR	0.001uF	5%	50V
C403	1-137-367-11	MYLAR	0.0033uF	5%	50V

Ref. No.	Part No.	Description			Remark
C404	1-126-965-91	ELECT	22uF	20%	50V
C405	1-126-965-91	ELECT	22uF	20%	50V
C407	1-126-960-11	ELECT	1uF	20%	50V
C410	1-164-159-11	CERAMIC	0.1uF		50V
C411	1-164-159-11	CERAMIC	0.1uF		50V
C427	1-124-282-00	ELECT	22uF	20%	25V
C428	1-162-290-31	CERAMIC	470PF	10%	50V
C501	1-164-159-11	CERAMIC	0.1uF		50V
C502	1-104-658-91	ELECT	100uF	20%	10V
C503	1-164-159-11	CERAMIC	0.1uF		50V
C504	1-164-159-11	CERAMIC	0.1uF		50V
C505	1-164-159-11	CERAMIC	0.1uF		50V
C508	1-161-494-00	CERAMIC	0.022uF		25V
C509	1-161-494-00	CERAMIC	0.022uF		25V
C510	1-161-494-00	CERAMIC	0.022uF		25V
C511	1-161-494-00	CERAMIC	0.022uF		25V
C512	1-161-494-00	CERAMIC	0.022uF		25V
C513	1-164-159-11	CERAMIC	0.1uF		50V
C514	1-164-159-11	CERAMIC	0.1uF		50V
C515	1-161-494-00	CERAMIC	0.022uF		25V
C516	1-164-159-11	CERAMIC	0.1uF		50V
C517	1-161-494-00	CERAMIC	0.022uF		25V
C518	1-164-159-11	CERAMIC	0.1uF		50V
C519	1-126-960-11	ELECT	1uF	20%	50V
C541	1-131-679-31	FILM	0.01uF	5%	50V
C542	1-136-287-11	FILM	0.0047uF	5%	100V
C543	1-131-700-31	FILM	0.47uF	5%	50V
C550	1-110-489-11	CAPACITOR	1F		5.5V
C551	1-164-159-11	CERAMIC	0.1uF		50V
C591	1-104-658-91	ELECT	100uF	20%	10V
C592	1-104-658-91	ELECT	100uF	20%	10V
C593	1-104-658-91	ELECT	100uF	20%	10V
C594	1-104-658-91	ELECT	100uF	20%	10V
C913	1-126-767-11	ELECT	1000uF	20%	16V
C914	1-126-767-11	ELECT	1000uF	20%	16V
C917	1-126-925-91	ELECT	470uF	20%	10V
C923	1-126-767-11	ELECT	1000uF	20%	16V
C927	1-126-925-91	ELECT	470uF	20%	10V
C928	1-126-925-91	ELECT	470uF	20%	10V
C933	1-126-933-11	ELECT	100uF	20%	16V
C934	1-126-933-11	ELECT	100uF	20%	16V
C935	1-104-658-91	ELECT	100uF	20%	10V
C936	1-126-962-11	ELECT	3.3uF	20%	50V
C938	1-126-925-91	ELECT	470uF	20%	10V
C939	1-164-159-11	CERAMIC	0.1uF		50V
C941	1-126-935-11	ELECT	470uF	20%	16V
C942	1-126-935-11	ELECT	470uF	20%	16V
C943	1-126-948-11	ELECT	100uF	20%	35V
C944	1-126-948-11	ELECT	100uF	20%	35V
C945	1-104-658-91	ELECT	100uF	20%	10V
C950	1-164-159-11	CERAMIC	0.1uF		50V
C951	1-164-159-11	CERAMIC	0.1uF		50V
C952	1-164-159-11	CERAMIC	0.1uF		50V
C953	1-104-658-91	ELECT	100uF	20%	10V
C954	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN501	1-779-299-11	CONNECTOR, FFC (LIF (NON-ZIF)) 31P			

Ref. No.	Part No.	Description	Remark
CN502	1-784-739-11	CONNECTOR, FFC 17P	
CN503	1-785-332-11	PIN, CONNECTOR (LIGHT ANGLE) 6P	
CN505	1-785-335-11	PIN, CONNECTOR (LIGHT ANGLE) 9P	
CN506	1-785-331-11	PIN, CONNECTOR (LIGHT ANGLE) 5P	
CN801	1-785-333-11	PIN, CONNECTOR (LIGHT ANGLE) 7P	
* CN901	1-564-524-11	PLUG, CONNECTOR 9P	
CN903	1-785-335-11	PIN, CONNECTOR (LIGHT ANGLE) 9P	
CN1101	1-784-921-11	PIN, CONNECTOR 4P	
		< DIODE >	
D327	8-719-991-33	DIODE 1SS133T-77	
D329	8-719-991-33	DIODE 1SS133T-77	
D501	8-719-991-33	DIODE 1SS133T-77	
D502	8-719-991-33	DIODE 1SS133T-77	
D503	8-719-991-33	DIODE 1SS133T-77	
D551	8-719-991-33	DIODE 1SS133T-77	
D941	8-719-109-93	DIODE RD6.2ESB2	
D942	8-719-110-53	DIODE RD20ESB2	
		< IC >	
IC302	8-749-015-59	IC BA4558-HT	
IC401	8-749-015-59	IC BA4558-HT	
IC402	8-749-015-59	IC BA4558-HT	
IC501	6-803-443-01	IC uPD703030BYGF-M13-3BA	
IC504	8-759-825-10	IC BS62LV256SC-70 (T)	
IC901	8-749-017-31	IC GP1FA550TZ (DIGITAL OPTICAL OUT)	
IC910	8-759-231-53	IC TA7805S	
IC920	8-759-071-48	IC TA7807S	
IC921	8-759-231-53	IC TA7805S	
IC930	8-759-173-39	IC NJU7201L50-T3	
IC931	8-759-658-02	IC BA3993F	
		< JACK >	
* J901	1-764-188-11	JACK (SMALL TYPE) (DIA. 3.5) (CONTROL A1 II)	
* J902	1-764-188-11	JACK (SMALL TYPE) (DIA. 3.5) (CONTROL A1 II)	
J903	1-794-012-11	JACK, PIN 4P (2ND CD IN,ANALOG OUT)	
		< COIL >	
L501	1-410-396-41	FERRITE 0.45uH	
L921	1-410-396-41	FERRITE 0.45uH	
L950	1-410-503-11	INDUCTOR 3.3uH	
		< TRANSISTOR >	
Q321	8-729-900-89	TRANSISTOR DTC144ES	
Q322	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q323	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q324	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q325	8-729-900-65	TRANSISTOR DTA144ES	
Q326	8-729-029-46	TRANSISTOR DTA143ESA	
Q327	8-729-900-65	TRANSISTOR DTA144ES	
Q328	8-729-900-65	TRANSISTOR DTA144ES	
Q329	8-729-900-65	TRANSISTOR DTA144ES	
Q421	8-729-900-89	TRANSISTOR DTC144ES	
Q422	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q423	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q424	8-729-141-26	TRANSISTOR 2SC3622A-LK	

Ref. No.	Part No.	Description	Remark
Q425	8-729-900-65	TRANSISTOR DTA144ES	
Q426	8-729-029-46	TRANSISTOR DTA143ESA	
Q501	8-729-900-89	TRANSISTOR DTC144ES	
Q502	8-729-029-46	TRANSISTOR DTA143ESA	
Q551	8-729-030-08	TRANSISTOR DTC144VSA	
Q552	8-729-900-65	TRANSISTOR DTA144ES	
Q562	8-729-900-65	TRANSISTOR DTA144ES	
Q570	8-729-116-02	TRANSISTOR BA1A4M-TP	
Q571	8-729-116-02	TRANSISTOR BA1A4M-TP	
Q572	8-729-116-02	TRANSISTOR BA1A4M-TP	
Q576	8-729-422-57	TRANSISTOR UN4111	
Q941	8-729-140-97	TRANSISTOR 2SB734-34	
Q950	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< RESISTOR >	
R301	1-247-895-00	CARBON 470K 5% 1/4W	
R302	1-247-843-11	CARBON 3.3K 5% 1/4W	
R303	1-247-843-11	CARBON 3.3K 5% 1/4W	
R306	1-247-895-00	CARBON 470K 5% 1/4W	
R307	1-249-422-11	CARBON 2.7K 5% 1/4W	
R309	1-247-847-91	CARBON 4.7K 5% 1/4W	
R310	1-249-429-11	CARBON 10K 5% 1/4W	
R311	1-249-429-11	CARBON 10K 5% 1/4W	
R312	1-249-429-11	CARBON 10K 5% 1/4W	
R313	1-247-895-00	CARBON 470K 5% 1/4W	
R314	1-249-409-11	CARBON 220 5% 1/4W	
R315	1-249-409-11	CARBON 220 5% 1/4W	
R317	1-247-847-91	CARBON 4.7K 5% 1/4W	
R321	1-247-879-91	CARBON 100K 5% 1/4W	
R322	1-249-421-11	CARBON 2.2K 5% 1/4W	
R323	1-249-421-11	CARBON 2.2K 5% 1/4W	
R324	1-249-421-11	CARBON 2.2K 5% 1/4W	
R325	1-247-879-91	CARBON 100K 5% 1/4W	
R326	1-247-807-31	CARBON 100 5% 1/4W	
R327	1-247-879-91	CARBON 100K 5% 1/4W	
R328	1-247-879-91	CARBON 100K 5% 1/4W	
R329	1-247-879-91	CARBON 100K 5% 1/4W	
R339	1-247-895-00	CARBON 470K 5% 1/4W	
R340	1-249-409-11	CARBON 220 5% 1/4W	
R401	1-247-895-00	CARBON 470K 5% 1/4W	
R402	1-247-843-11	CARBON 3.3K 5% 1/4W	
R403	1-247-843-11	CARBON 3.3K 5% 1/4W	
R406	1-247-895-00	CARBON 470K 5% 1/4W	
R407	1-249-422-11	CARBON 2.7K 5% 1/4W	
R409	1-247-847-91	CARBON 4.7K 5% 1/4W	
R410	1-249-429-11	CARBON 10K 5% 1/4W	
R411	1-249-429-11	CARBON 10K 5% 1/4W	
R412	1-249-429-11	CARBON 10K 5% 1/4W	
R413	1-247-895-00	CARBON 470K 5% 1/4W	
R414	1-249-409-11	CARBON 220 5% 1/4W	
R415	1-249-409-11	CARBON 220 5% 1/4W	
R417	1-247-847-91	CARBON 4.7K 5% 1/4W	
R421	1-247-879-91	CARBON 100K 5% 1/4W	
R422	1-249-421-11	CARBON 2.2K 5% 1/4W	
R423	1-249-421-11	CARBON 2.2K 5% 1/4W	
R424	1-249-421-11	CARBON 2.2K 5% 1/4W	
R425	1-247-879-91	CARBON 100K 5% 1/4W	

MAIN **T.SENS** **TRANS**

Ref. No.	Part No.	Description			Remark
R426	1-247-807-31	CARBON	100	5%	1/4W
R439	1-247-895-00	CARBON	470K	5%	1/4W
R440	1-249-409-11	CARBON	220	5%	1/4W
R501	1-247-879-91	CARBON	100K	5%	1/4W
R502	1-249-429-11	CARBON	10K	5%	1/4W
R503	1-247-831-91	CARBON	1K	5%	1/4W
R504	1-249-421-11	CARBON	2.2K	5%	1/4W
R505	1-249-429-11	CARBON	10K	5%	1/4W
R506	1-249-429-11	CARBON	10K	5%	1/4W
R507	1-247-879-91	CARBON	100K	5%	1/4W
R508	1-249-429-11	CARBON	10K	5%	1/4W
R509	1-249-429-11	CARBON	10K	5%	1/4W
R510	1-249-429-11	CARBON	10K	5%	1/4W
R511	1-249-429-11	CARBON	10K	5%	1/4W
R512	1-249-429-11	CARBON	10K	5%	1/4W
R513	1-247-879-91	CARBON	100K	5%	1/4W
R514	1-249-429-11	CARBON	10K	5%	1/4W
R515	1-247-847-91	CARBON	4.7K	5%	1/4W
R516	1-249-429-11	CARBON	10K	5%	1/4W
R518	1-249-429-11	CARBON	10K	5%	1/4W
R519	1-247-807-31	CARBON	100	5%	1/4W
R520	1-247-807-31	CARBON	100	5%	1/4W
R521	1-247-807-31	CARBON	100	5%	1/4W
R522	1-247-807-31	CARBON	100	5%	1/4W
R523	1-247-807-31	CARBON	100	5%	1/4W
R524	1-247-807-31	CARBON	100	5%	1/4W
R525	1-247-807-31	CARBON	100	5%	1/4W
R526	1-247-807-31	CARBON	100	5%	1/4W
R527	1-247-807-31	CARBON	100	5%	1/4W
R528	1-247-807-31	CARBON	100	5%	1/4W
R529	1-247-879-91	CARBON	100K	5%	1/4W
R530	1-247-831-91	CARBON	1K	5%	1/4W
R531	1-247-831-91	CARBON	1K	5%	1/4W
R532	1-247-879-91	CARBON	100K	5%	1/4W
R533	1-249-429-11	CARBON	10K	5%	1/4W
R534	1-247-847-91	CARBON	4.7K	5%	1/4W
R535	1-247-807-31	CARBON	100	5%	1/4W
R536	1-247-807-31	CARBON	100	5%	1/4W
R537	1-247-807-31	CARBON	100	5%	1/4W
R538	1-247-807-31	CARBON	100	5%	1/4W
R539	1-247-807-31	CARBON	100	5%	1/4W
R540	1-247-807-31	CARBON	100	5%	1/4W
R541	1-247-879-91	CARBON	100K	5%	1/4W
R542	1-247-887-00	CARBON	220K	5%	1/4W
R543	1-249-421-11	CARBON	2.2K	5%	1/4W
R544	1-247-879-91	CARBON	100K	5%	1/4W
R545	1-249-429-11	CARBON	10K	5%	1/4W
R546	1-247-807-31	CARBON	100	5%	1/4W
R550	1-249-429-11	CARBON	10K	5%	1/4W
R551	1-249-429-11	CARBON	10K	5%	1/4W
R552	1-247-807-31	CARBON	100	5%	1/4W
R553	1-247-807-31	CARBON	100	5%	1/4W
R554	1-247-807-31	CARBON	100	5%	1/4W
R570	1-247-847-91	CARBON	4.7K	5%	1/4W
R571	1-247-847-91	CARBON	4.7K	5%	1/4W
R591	1-247-847-91	CARBON	4.7K	5%	1/4W
R931	1-247-887-00	CARBON	220K	5%	1/4W
R932	1-249-385-11	CARBON	2.2	5%	1/4W

Ref. No.	Part No.	Description			Remark
R941	1-249-389-11	CARBON	4.7	5%	1/4W
R942	1-249-385-11	CARBON	2.2	5%	1/4W
R943	1-249-421-11	CARBON	2.2K	5%	1/4W
R944	1-249-421-11	CARBON	2.2K	5%	1/4W
R950	1-247-847-91	CARBON	4.7K	5%	1/4W
R951	1-249-429-11	CARBON	10K	5%	1/4W
R952	1-249-393-11	CARBON	10	5%	1/4W
		< VARIABLE RESISTOR >			
RV501	1-241-765-11	RES, ADJ CERMET	22K		
		< TEST PIN >			
* TP1	1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P			
		< VIBRATOR >			
X501	1-795-661-11	VIBRATOR, CERAMIC (16MHz)			
**********					
	1-676-828-11	T.SENS BOARD			
		**********			
		< CONNECTOR >			
* CN81	1-506-486-11	PIN, CONNECTOR 7P			
CN82	1-506-481-11	PIN, CONNECTOR 2P			
CN83	1-506-481-11	PIN, CONNECTOR 2P			
		< IC >			
IC81	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
IC82	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
IC83	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
IC84	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
		< RESISTOR >			
R81	1-249-416-11	CARBON	820	5%	1/4W
R82	1-249-416-11	CARBON	820	5%	1/4W
R83	1-249-416-11	CARBON	820	5%	1/4W
R84	1-249-416-11	CARBON	820	5%	1/4W
R85	1-249-415-11	CARBON	680	5%	1/4W
**********					
	A-4727-717-A	TRANS BOARD, COMPLETE			
		**********			
	7-685-871-01	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C901	1-126-936-11	ELECT	3300uF	20%	16V
C902	1-126-960-11	ELECT	1uF	20%	50V
C911	1-128-576-11	ELECT	100uF	20%	63V
C912	1-126-948-11	ELECT	100uF	20%	35V
C920	1-161-494-00	CERAMIC	0.022uF		25V
C921	1-126-768-11	ELECT	2200uF	20%	16V
C922	1-126-768-11	ELECT	2200uF	20%	16V
C930	1-161-494-00	CERAMIC	0.022uF		25V
C931	1-126-768-11	ELECT	2200uF	20%	16V
C932	1-126-768-11	ELECT	2200uF	20%	16V
C933	1-126-967-11	ELECT	47uF	20%	50V
C940	1-136-173-00	MYLAR	0.47uF	5%	50V
C941	1-136-173-00	MYLAR	0.47uF	5%	50V

Ref. No.	Part No.	Description			Remark
C942	1-109-953-11	ELECT	2.2uF	20%	50V
C943	1-164-159-11	CERAMIC	0.1uF		50V
C951	1-136-173-00	MYLAR	0.47uF	5%	50V
C961	1-136-165-00	MYLAR	0.1uF	5%	50V
C962	1-164-159-11	CERAMIC	0.1uF		50V
C963	1-164-159-11	CERAMIC	0.1uF		50V
C971	1-136-165-00	MYLAR	0.1uF	5%	50V
C972	1-164-159-11	CERAMIC	0.1uF		50V
C973	1-164-159-11	CERAMIC	0.1uF		50V
⚠C991	1-113-925-11	CERAMIC	0.01uF	20%	250V
C992	1-113-924-11	CERAMIC	0.0047uF	20%	250V
C993	1-113-924-11	CERAMIC	0.0047uF	20%	250V
		< CONNECTOR >			
CN601	1-506-469-11	PIN, CONNECTOR 4P			
CN602	1-506-469-11	PIN, CONNECTOR 4P			
CN603	1-568-951-11	PIN, CONNECTOR 2P			
* CN991	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
CNP902	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
		< DIODE >			
D901	8-719-210-21	DIODE	11EQS04		
D902	8-719-210-21	DIODE	11EQS04		
D903	8-719-210-21	DIODE	11EQS04		
D904	8-719-210-21	DIODE	11EQS04		
D905	8-719-991-33	DIODE	1SS133T-77		
D906	8-719-991-33	DIODE	1SS133T-77		
D907	8-719-991-33	DIODE	1SS133T-77		
D911	6-500-522-11	DIODE	10EDB40-TA2B5		
D912	8-719-150-92	DIODE	RD33EB3T		
D913	8-719-109-93	DIODE	RD6.2ESB2		
D921	6-500-522-11	DIODE	10EDB40-TA2B5		
D922	6-500-522-11	DIODE	10EDB40-TA2B5		
D923	6-500-522-11	DIODE	10EDB40-TA2B5		
D924	6-500-522-11	DIODE	10EDB40-TA2B5		
D931	6-500-522-11	DIODE	10EDB40-TA2B5		
D932	6-500-522-11	DIODE	10EDB40-TA2B5		
D933	6-500-522-11	DIODE	10EDB40-TA2B5		
D934	6-500-522-11	DIODE	10EDB40-TA2B5		
D935	8-719-110-41	DIODE	RD15ESB2		
D991	8-719-991-33	DIODE	1SS133T-77		
		< IC >			
IC941	8-759-822-38	IC	LA6510		
IC961	8-759-822-38	IC	LA6510		
		< LINE FILTER >			
⚠L991	1-424-485-11	FILTER, LINE			
		< TRANSISTOR >			
Q901	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q911	8-729-140-97	TRANSISTOR	2SB734-34		
Q931	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q941	8-729-900-65	TRANSISTOR	DTA144ES		
Q942	8-729-900-89	TRANSISTOR	DTC144ES		
Q951	8-729-900-65	TRANSISTOR	DTA144ES		
Q952	8-729-900-89	TRANSISTOR	DTC144ES		

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R901	1-247-831-91	CARBON	1K	5%	1/4W
R902	1-249-429-11	CARBON	10K	5%	1/4W
R903	1-249-421-11	CARBON	2.2K	5%	1/4W
R904	1-249-429-11	CARBON	10K	5%	1/4W
R911	1-247-847-91	CARBON	4.7K	5%	1/4W
R912	1-249-421-11	CARBON	2.2K	5%	1/4W
R913	1-247-847-91	CARBON	4.7K	5%	1/4W
R914	1-247-807-31	CARBON	100	5%	1/4W
R931	1-249-421-11	CARBON	2.2K	5%	1/4W
R932	1-249-421-11	CARBON	2.2K	5%	1/4W
R940	1-247-807-31	CARBON	100	5%	1/4W
R941	1-247-807-31	CARBON	100	5%	1/4W
R942	1-249-421-11	CARBON	2.2K	5%	1/4W
R943	1-247-879-91	CARBON	100K	5%	1/4W
R944	1-247-831-91	CARBON	1K	5%	1/4W
R945	1-247-879-91	CARBON	100K	5%	1/4W
R946	1-247-883-00	CARBON	150K	5%	1/4W
R947	1-247-847-91	CARBON	4.7K	5%	1/4W
R948	1-249-381-11	CARBON	1	5%	1/4W
R949	1-249-381-11	CARBON	1	5%	1/4W
R951	1-247-807-31	CARBON	100	5%	1/4W
R952	1-249-421-11	CARBON	2.2K	5%	1/4W
R953	1-247-879-91	CARBON	100K	5%	1/4W
R954	1-247-831-91	CARBON	1K	5%	1/4W
R955	1-247-879-91	CARBON	100K	5%	1/4W
R956	1-247-883-00	CARBON	150K	5%	1/4W
R957	1-247-847-91	CARBON	4.7K	5%	1/4W
R958	1-249-381-11	CARBON	1	5%	1/4W
R959	1-249-381-11	CARBON	1	5%	1/4W
R961	1-247-883-00	CARBON	150K	5%	1/4W
R962	1-247-860-11	CARBON	16K	5%	1/4W
R963	1-247-883-00	CARBON	150K	5%	1/4W
R964	1-247-883-00	CARBON	150K	5%	1/4W
R965	1-249-431-11	CARBON	15K	5%	1/4W
R966	1-249-381-11	CARBON	1	5%	1/4W
R967	1-249-381-11	CARBON	1	5%	1/4W
R968	1-249-393-11	CARBON	10	5%	1/4W
R971	1-247-883-00	CARBON	150K	5%	1/4W
R972	1-247-860-11	CARBON	16K	5%	1/4W
R973	1-247-885-00	CARBON	180K	5%	1/4W
R974	1-247-885-00	CARBON	180K	5%	1/4W
R975	1-249-431-11	CARBON	15K	5%	1/4W
R976	1-249-381-11	CARBON	1	5%	1/4W
R977	1-249-381-11	CARBON	1	5%	1/4W
R978	1-249-393-11	CARBON	10	5%	1/4W
		< RELAY >			
⚠RY991	1-755-299-11	RELAY			
		< TRANSFORMER >			
⚠T901	1-437-709-11	TRANSFORMER, POWER			
⚠T911	1-435-327-11	TRANSFORMER, POWER			

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
60	1-469-854-11	CORE, FERRITE	
401	1-782-817-11	WIRE (FLAT TYPE) (16 CORE)	
⚠403	A-3328-818-A	OPTICAL PICK-UP KSM-213BFN/C2N1	
⚠CNP901	1-783-820-21	CORD, POWER	
M601	A-4672-895-A	MOTOR (400) ASSY (TABLE)	
M602	A-4672-895-A	MOTOR (400) ASSY (LOADING)	
M603	1-541-632-12	MOTOR, DC (DOOR)	
⚠T901	1-437-709-11	TRANSFORMER, POWER	
⚠T911	1-435-327-11	TRANSFORMER, POWER	
**********			
		ACCESSORIES	
		**********	
	1-477-214-11	COMMANDER, STANDARD (RM-DX455)	
	1-790-735-12	CORD, CONNECTION (AUDIO)	
	2-546-621-11	MANUAL, INSTRUCTION (ENGLISH)	
	2-546-621-21	MANUAL, INSTRUCTION (FRENCH)	
	4-228-696-01	COVER, BATTERY (FOR RM-DX455)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MEMO

REVISION HISTORY

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Ver.	Date	Description of Revision
1.0	2004.11	New